

1904

Bidwell

Threshing Machinery

Batavia, N. Y., U. S. A.

THE BIDWELL THRESHER WORKS,

Batavia, N. Y., U. S. A.

MANUFACTURERS OF

THE BIDWELL

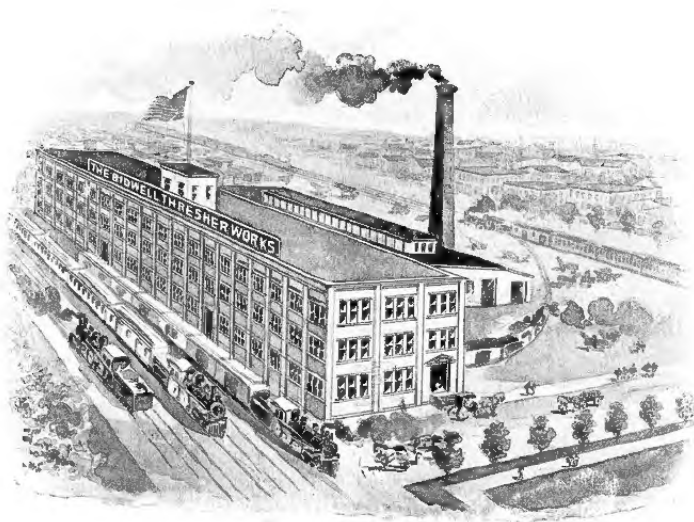
Bean Thresher

Pea Huller

Grain Separator

Bean Harvester

THE BIDWELL THRESHER WORKS, BATAVIA, N. Y., U. S. A.



ILLINOIS,

J. R. WALKER, Mt. Vernon.

BRANCH HOUSES :

MICHIGAN, 118-120 Allegan St., Lansing

R. E. McHUGH, Manager.

1904

GREETING TO ALL.



Edw. Bidwell.

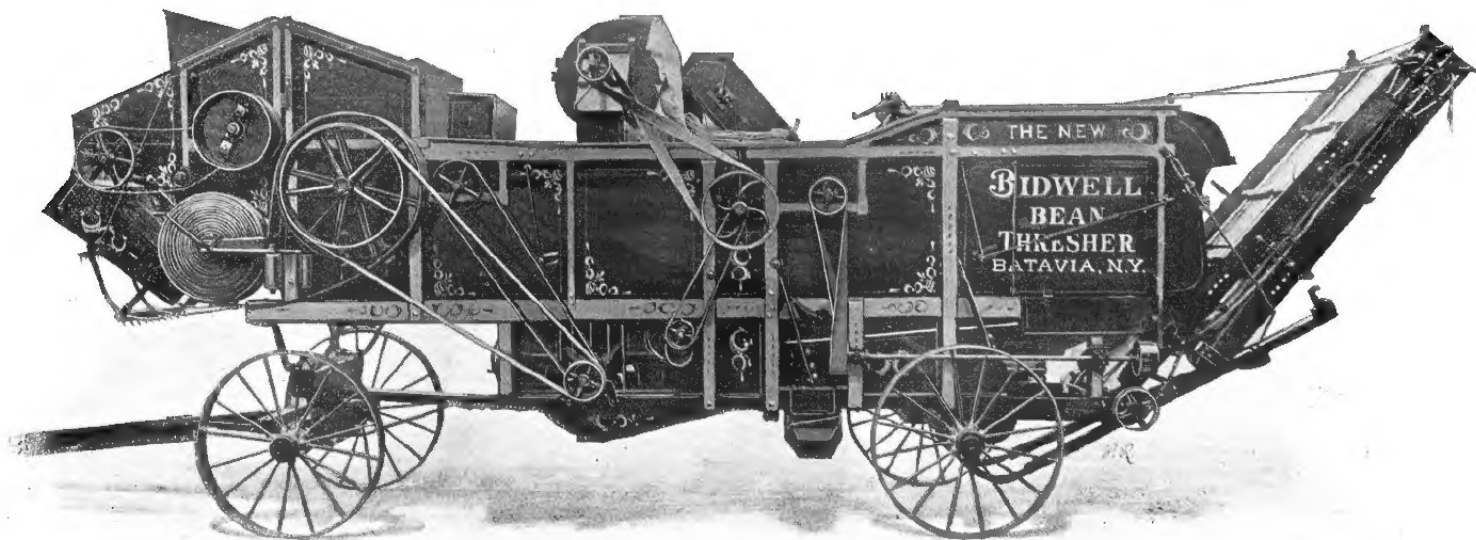


H. A. Bidwell

Bidwell Bean Thresher.

WITH 1904 SELF-FEEDER (AUTOMATIC)

DUST COLLECTOR.

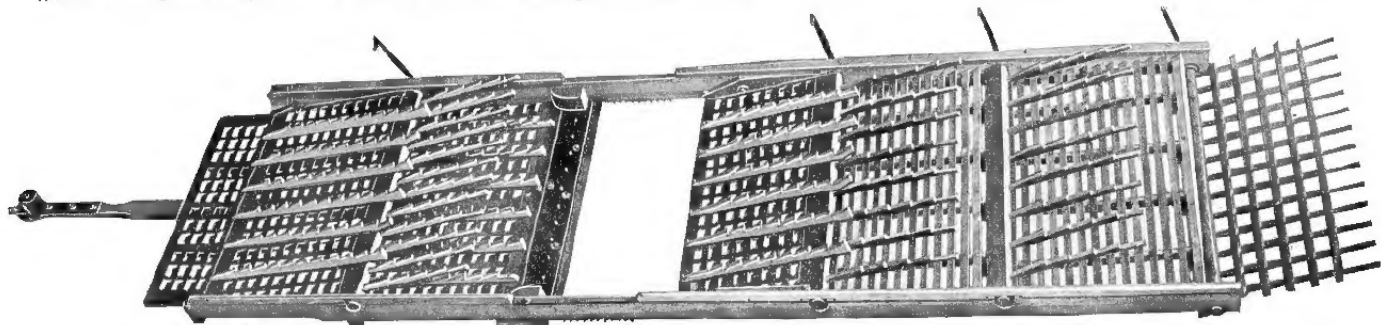


GUARANTEED : to thresh more beans
to do better work
to be more durable than any other machine on the market.

PRACTICAL SCIENTIFIC DESIGN.

The general principle of the BIDWELL BEAN MACHINE AND PEA HULLER is two heavy, strong Cylinders and Concaves for threshing, and a Vibrating Bolt with oscillating forks for separating the beans from the threshed pods. The first cylinder runs quite slow—driven by a 28-inch main drive pulley.

Ample separation between the two cylinders provides that no threshed beans or peas will pass through the second cylinder, which runs quite fast, and will thresh those remaining in the pods clean.

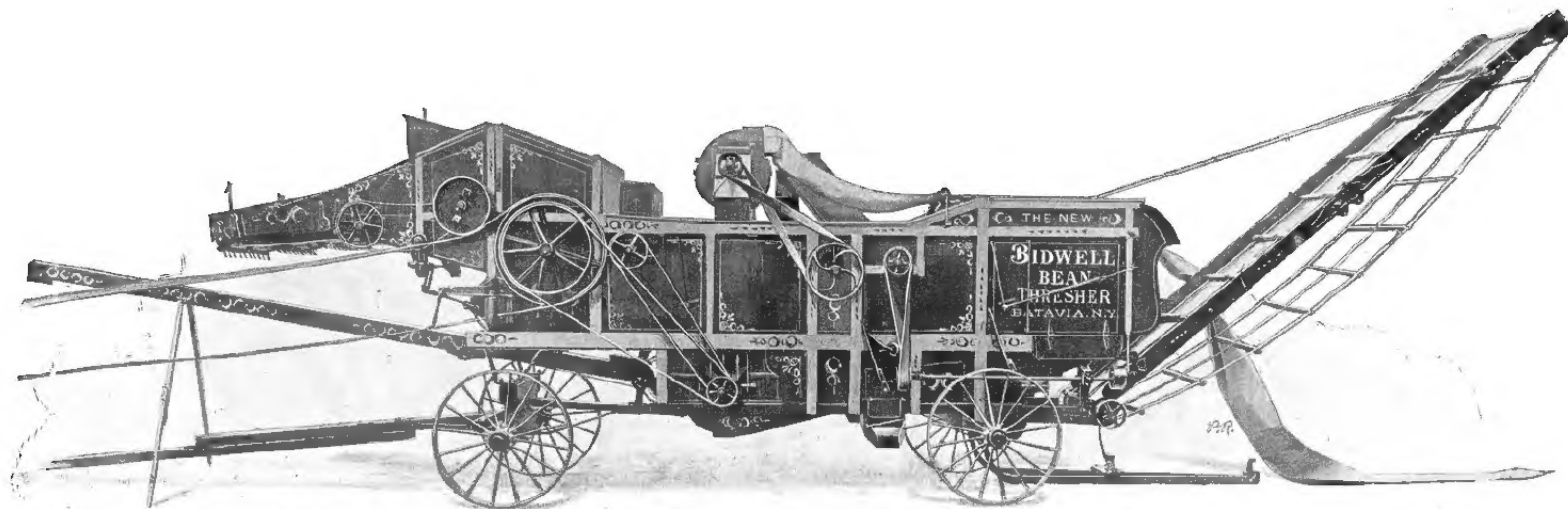


THE DOUBLE SEPARATING BOLT, (patent pending),

Has more separation than anything ever placed upon the market for a Bean Thresher or Pea Huller. This Bolt in the NEW BIDWELL (which is not flat like the old style), is an up-hill incline and a drop. It forms, with the vibrating forks and fingers, a double separation.

The Vibrating Fingers are made fish-back, and hold up the coarse vines from the bottom of the bolt. *Any* of the forks can be quickly removed (without taking out the bolt).

A wide strip of rubber belting—running the full length of the machine over the side of the bolt—prevents dirt, beans or small stones working in between the sides of the machine and bolter.



16 ft. DIRT CONVEYOR, EXTENDED.

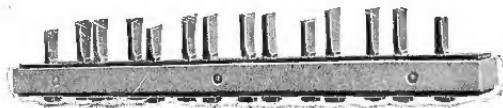
SELF-FEEDER,

DUST COLLECTOR.

STRAW CARRIER.

THE CONCAVES

Are guaranteed to do the business where great difficulty has been experienced in all other Bean Threshers. The Concaves are made of white oak, two inches thick, backed by heavy wrought iron on both top and bottom. Being thus constructed, they will permit a certain amount of spring in case a large stone or other obstruction goes through the cylinder, *and will not break*. A large proportion of breakage in other makes is unavoidable, they having iron concaves.



REAR CONCAVES

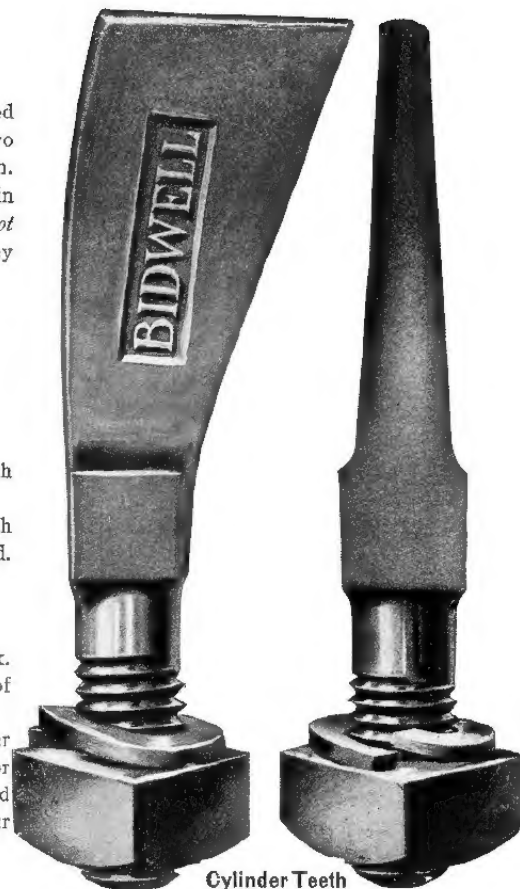
For 1904 consist of a new device. The concaves are made in sections with double rows of teeth in a concave the same as the front concaves,

The advantages are many. More threshing concave surface and more teeth are permitted—being in a circle. For better separation, one open grate is used. The concaves can never possibly lift up or get out of place.

TOOTH.

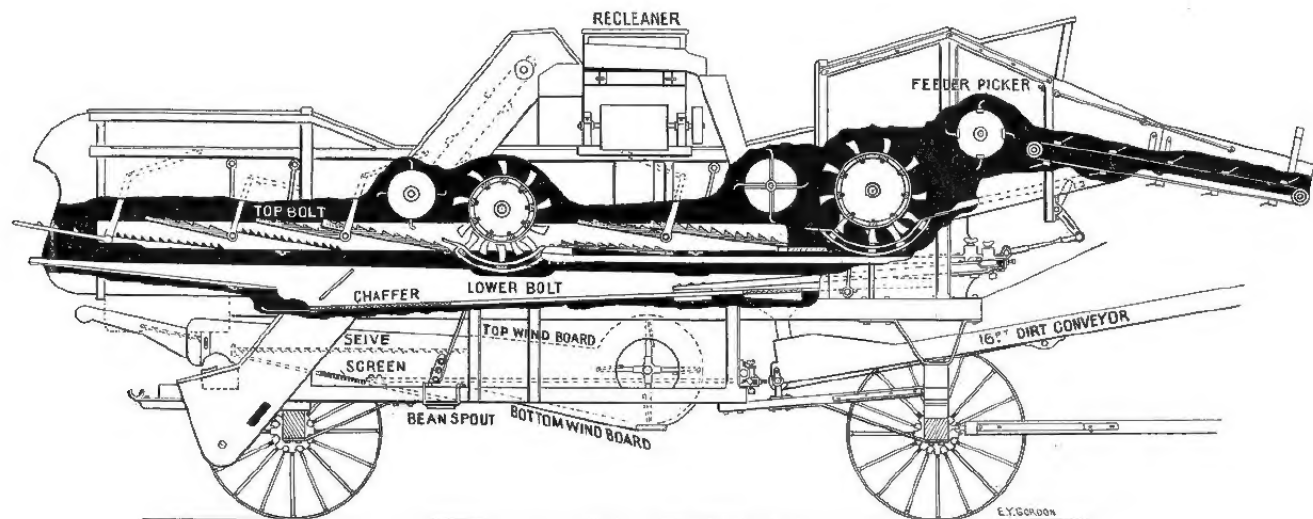
Being very wide and heavy and with a square, wedge-shaped shank. Our customers will pronounce these teeth the best threshers of tough peas or beans, and the most lasting of any they have ever seen.

The teeth are extra heavy and strong, being fully twice as heavy as in other machines. A SPRING WASHER is used on the nuts under the teeth. We endeavor to furnish our customers the very best teeth that it is possible to make, and we will gladly replace any teeth that are broken, free of charge, if our customers will return the same.



Cylinder Teeth

Bidwell Bean Thresher.



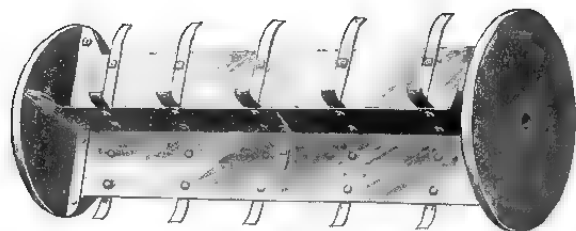
SECTIONAL VIEW.

BEATERS.

The *front beater* is made of heavy sheet steel with four wings and pickers, and solid heavy heads.

The *rear cylinder beater* is round, with four rows of pickers.

These beaters will *not wind*, and their object is to relieve the cylinders and help separation.



Front Main Beater.

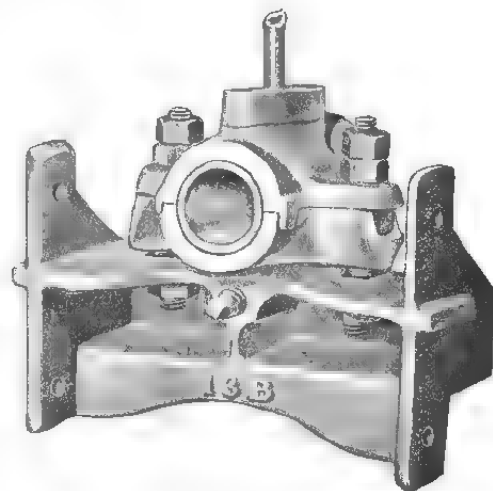


Tooth Straightener.

THE FRONT AND REAR CYLINDERS

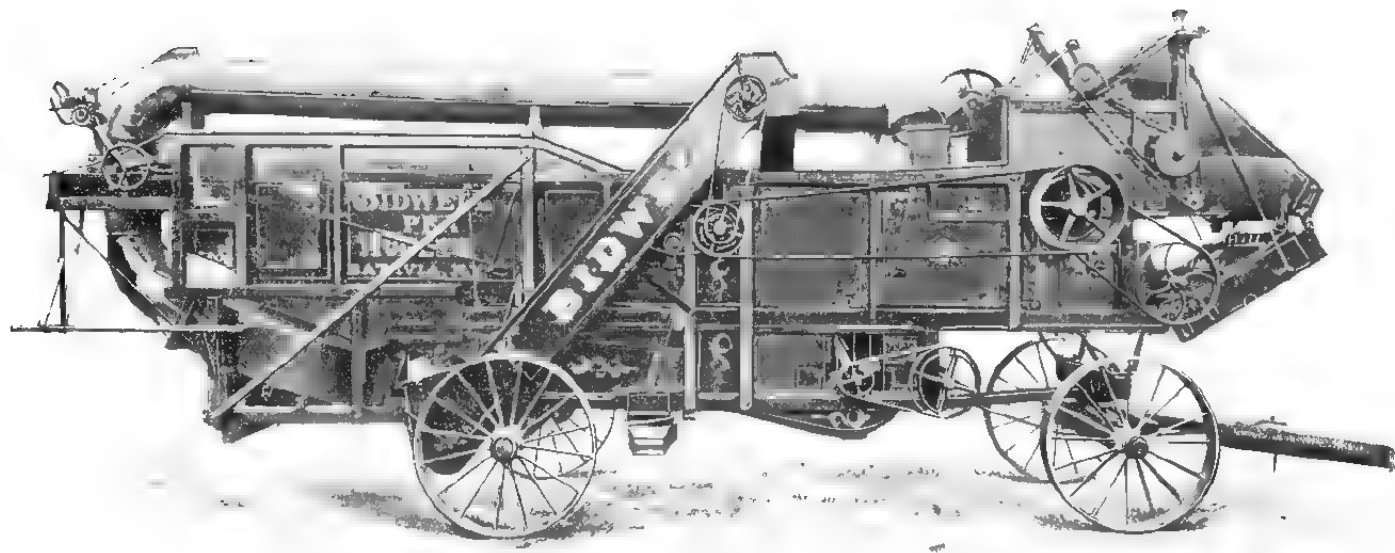
Are thirty six inches long and have double heavy bars. Two center supporting heads give additional strength and truss to these bars, making a very solid and heavy cylinder.

The shafts are one and three-fourths inch steel, running in only *two* adjustable cylinder boxes of large bearing. These adjustable pivot cylinder boxes (of same construction as on Grain Separator) are each eight inches long. The bottom half rests on a ball bearing in such a manner that the boxes always line themselves with the shaft. The end play in cylinders is adjusted very easily by a set screw on each side of the machine.



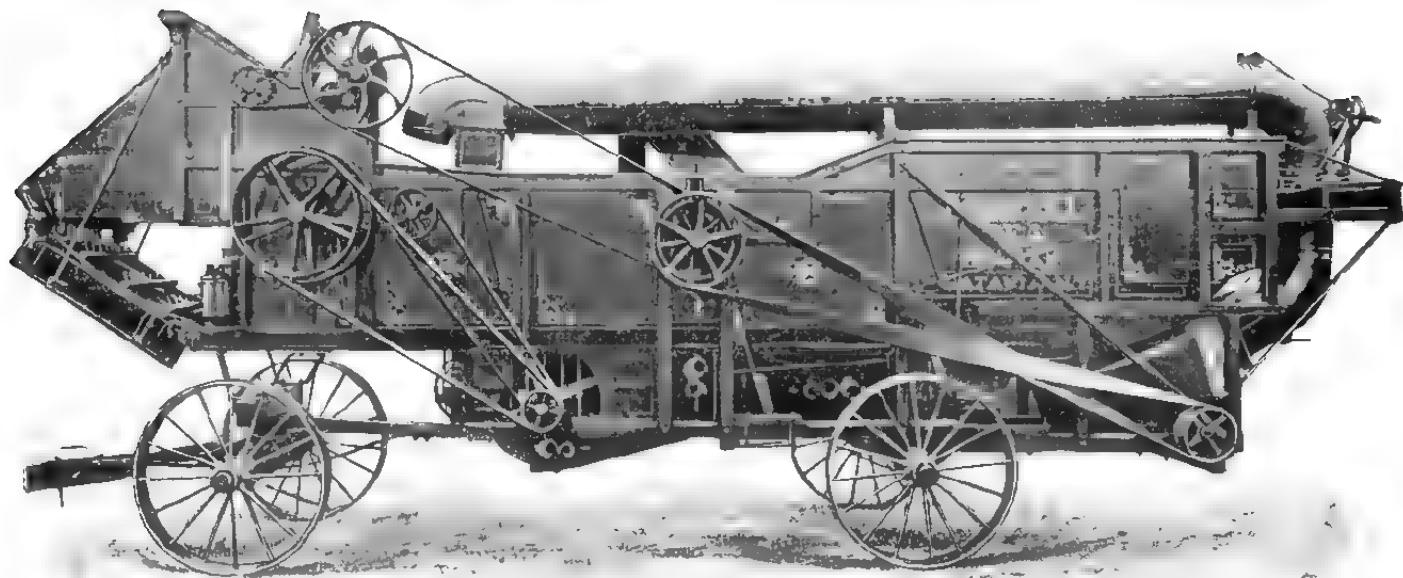
Iron Frame and Adjustable Pivot Box for Rear Cylinder.

The Bidwell Pea Huller.



WITH WIND STACKER AND SELF-FEEDER. (Left side view.)

The Bidwell Pea Huller.

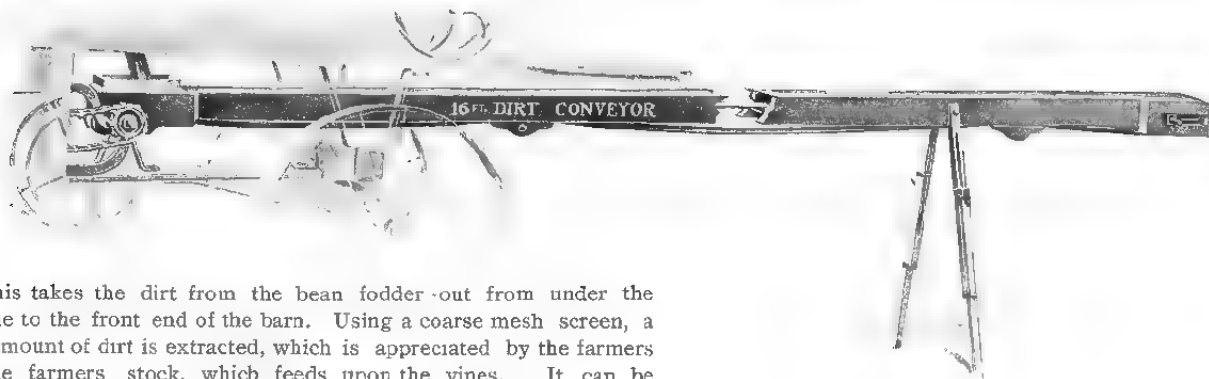


WITH WIND STACKER AND SELF-FEEDER. (Right side view.)

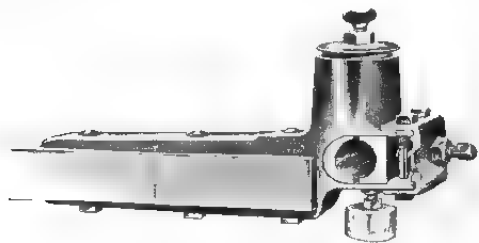
Guaranteed stronger made, more durable, and capable of doing MORE WORK WELL than any other machine on the market.

BIDWELL (IMPROVED) DIRT CONVEYOR, Patented.

16 ft. Long.



This takes the dirt from the bean fodder -out from under the machine to the front end of the barn. Using a coarse mesh screen, a large amount of dirt is extracted, which is appreciated by the farmers and the farmers stock, which feeds upon the vines. It can be raised at outer end to empty into a wagon box or a barrel.



Large Double-Oiling Pitman.

THE LARGE DOUBLE-OILING PITMAN

Has a cup for oil and also a hard grease cup. The crank pitman is therefore perfectly lubricated and oiled from both top and bottom which method better keeps the dust from the bearings.

All the liners are the best grade of tough malleable iron and are milled to fit the shafting. No cast iron is used as on other makes.

THE FRAME AND MAIN SIDES

Are made of all well seasoned hard wood and are very solid and substantial, being bolted together with long, strong bolts. The main sills run the whole length of the machine over the front sills, which makes it very handy to turn around short. It is mounted very low, and is not too heavy. It is convenient to get at all parts from the floor.

THE BIDWELL (Patent) ELEVATOR

Is made of hard maple throughout. Heavy iron strips extend up the full length of the inside, to prevent the elevator belt wearing and gouging into the sides, and stones working in and wedging. By a patent arrangement of our own, the dirt can work out under the belt and prevent the elevator clogging or bothering.

Malleable rub irons are riveted to the belt thereby giving to the belt more durability.

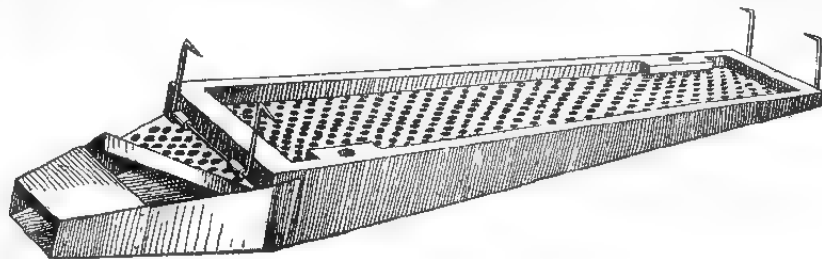
The Elevator being larger, it has an ample capacity for ALL REQUIREMENTS (either wet or dry beans.) We will guarantee it is the only Elevator on a Bean Thresher or Pea Huller that will do its work satisfactorily, and is only found on the Bidwell. The Elevator belt can be perfectly adjusted by four take-up boxes, one on each side at the top and bottom.

THE PULLEYS

Are extra large, and with wide face covered with belting. Please note how our machine is driven. It is belted evenly dividing up the work on both sides of the machine, the hardest driving parts being belted so that there is a counterbalance draw or strain from opposite directions, thereby relieving the strain and lessening the wear on the boxes and the shafts.

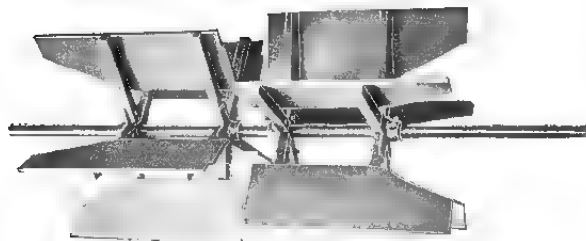


Hard Oil Cup.



Screen Sieve Spout. This can be furnished fine, medium or coarse mesh.

Mill Fans.



THE SHOE

Is hung upon HICKORY SPRING HANGERS and has a very short end shake, which is nicely counterbalanced. The pitman is connected to the center of the shoe. The construction will be greatly appreciated by those who have previously operated other machines. "No-choke" or lip sieves are furnished, as desired, for larger or smaller beans or peas.

THE CHAFFER—(No choke)

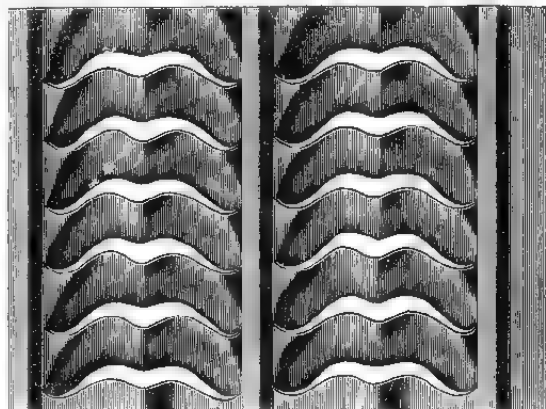
Is fastened and hung from the lower bolter over the mill sieve, having a 3 inch throw. It is designed to riddle off the coarsest of the chaff coming down on the mill sieve. We have a nicely adjusted slanting wind board over this Chaffer, which will keep it clear, under all circumstances. The Chaffer, therefore, gives the mill sieve (which has a smaller mesh, and quick, short shake) a chance to clean the beans or peas under all conditions, WET OR DRY. (See sectional view, page 8.)

MILL AND SHOE

Will clean all beans or peas possible to thresh, requiring the least possible attention after being properly set (which is very different from the old style). We use a double fan, (1 3-8 inch steel shaft with 6 inch boxes) which is driven direct from the first cylinder by a five inch belt.

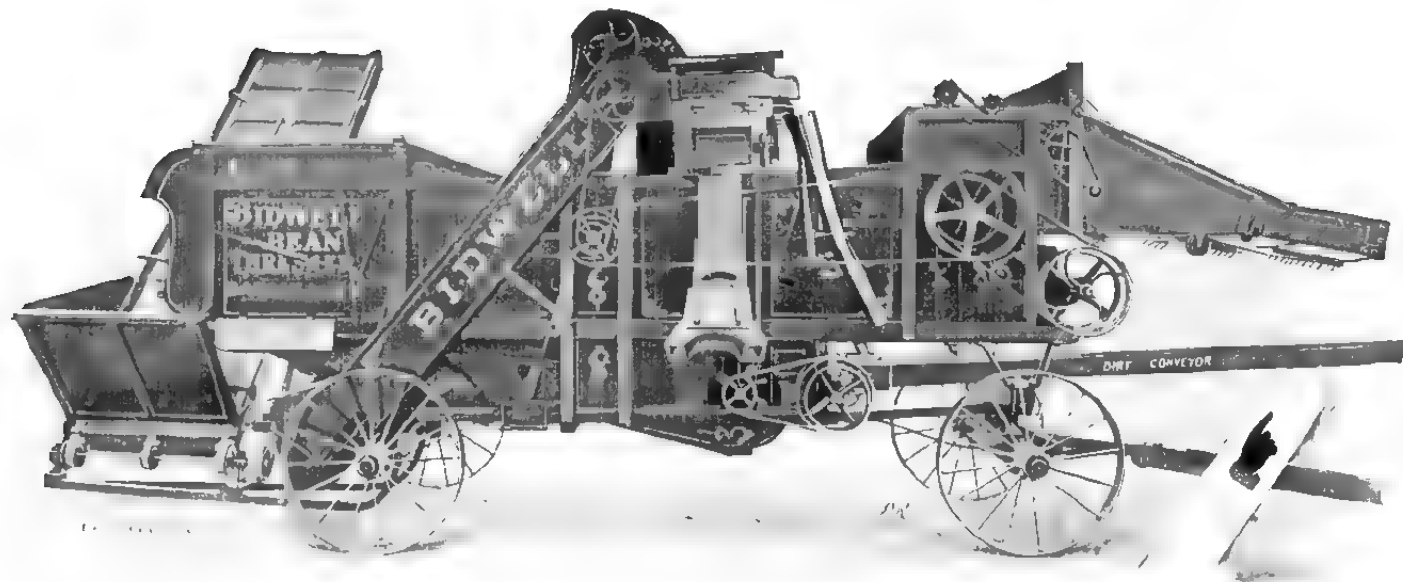
THE DOUBLE FAN

gives an *even, strong blast* up through the sieves (undershot style) affording the best possible chance of cleaning.



No-Choke Sieve.

Bidwell Bean Thresher.



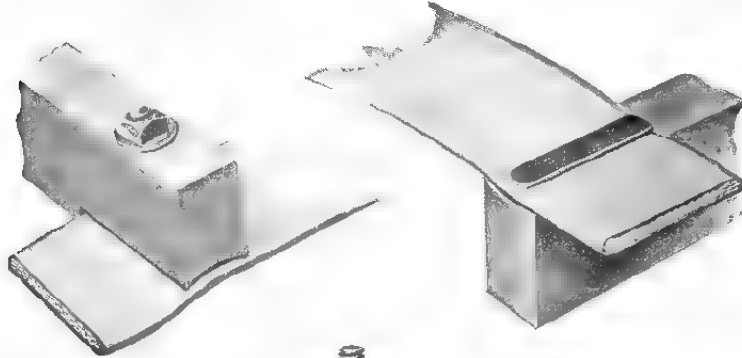
With 1904 Self-Feeder (automatic).

Recleaner and Dirt Crusher.

Bagger and Register (plain).

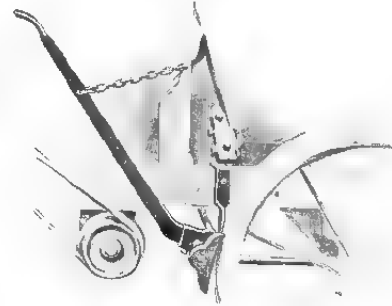
THE COMBINATION FOLDING SIDE AND STRAIGHT STACKER

Is highly appreciated by the farmers for barn threshing. It saves the expense of one hand, as it delivers the fodder to either side direct into the mow.



STACKER RAKES.

The slats are bolted to the three belts with a specially made oblong bolt from our own pattern. Edges are rounding, therefore this fastner does not cut through the belt, and helps to make a very strong and lasting straw carrier rake. Only first-class 3 ply BOSTON rubber belting, two inches wide, is used in their construction.



A BRAKE

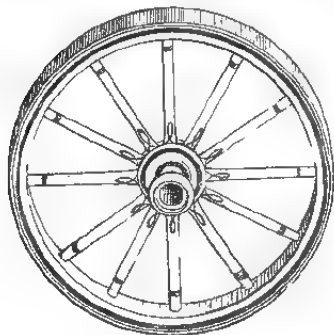
Will be furnished at an extra cost of \$8.00, for BEAN THRESHER, PEA HULLER or GRAIN SEPARATOR. The brake is strong and powerful by the construction of the leverage.

THE BEAN THRESHER AS A CORN SHELLER AND SHREDDER

It has no equal for good, clean, fast work. The stalks can be fed into the machine, butts first, as fast as a set of men can handle them. If the corn is dry enough, so as not to spoil after being threshed, it is the quickest, cheapest and most satisfactory way to handle a large crop of corn. It also shreds the large stalks, leaving them in extra good shape for feeding. (We would recommend mixing with the corn fodder, after it is shredded, a certain amount of dry straw. The straw will absorb and gather up the moisture from the corn fodder, which will keep the whole from spoiling, and will make extra good feeding—equal to clover hay. Try it and see.)

THE WAGONS

Under all our machines are made for severe use, and to stand rough roads. The axles are of the best hard maple butts, large in size and strongly trussed. Steel axles will be used on the large sized threshers. A choice of truck wheels is given.

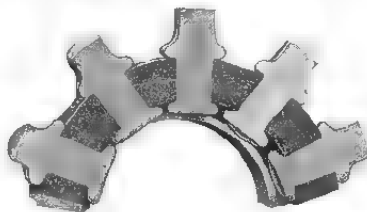


Wooden Wheels

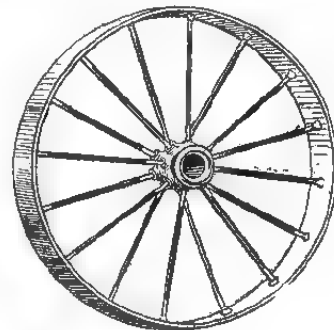
Are made from good oak timber bent rims, and are rolled in hot oil before painting. The tires are 3-8 inches, firmly set, and furthermore, bolted on to the felloes.

The Special Tongue

Furnished on *all* machines is easily taken apart for coupling behind the engine or tank.



**Hub of Steel Wheel Showing
Swedged Spokes.**



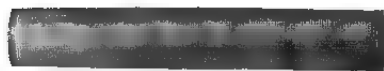
Steel Truck Wheels

Are furnished when requested, in 4, 6, or 8 inch tread. They are very neat in design and exceptionally strong and durable. The wheels have steel spokes and 1-2 inch steel tires. The spokes are swedged into the hub and rim and cannot work loose.

RECLENER AND LUMP CRUSHER.

THE RIGHT PRINCIPLE.

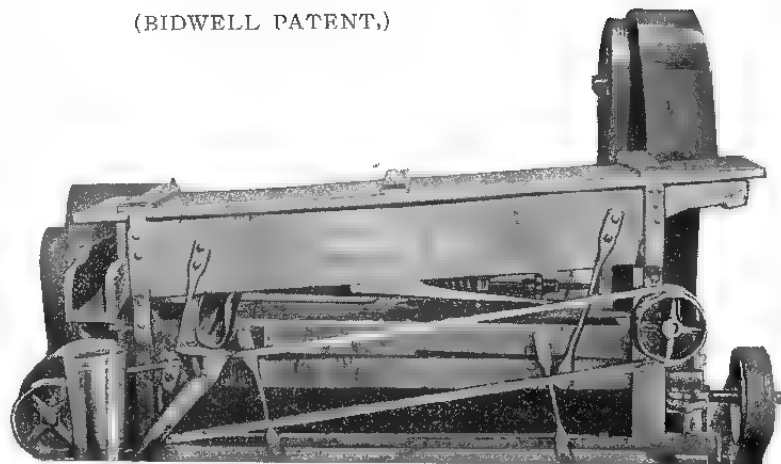
All the threshermen, with but very few exceptions, demand them. They say there would be no use of their buying a bean machine without one, for the FARMERS would not give them their work (providing some other thresher competitor had one, who could be reached.) The farmer, if care has been taken when his job was done to adjust the sieve for his particular beans (there being six different changes of sieves), can draw his beans to market right from the machine, and save all the trouble of running them through the fanning mill, etc, and recleaning them. The THRESHERMAN, with one cent extra for threshing, will pay for the Recleaner, besides securing much more work by having it than he otherwise would. In many sections two cents extra is charged.



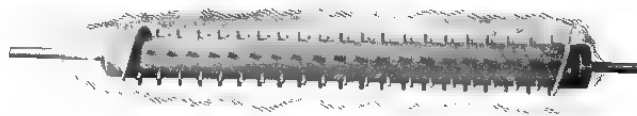
Casing of Dirt Crusher.

(Perforated with square holes.)

(BIDWELL PATENT.)



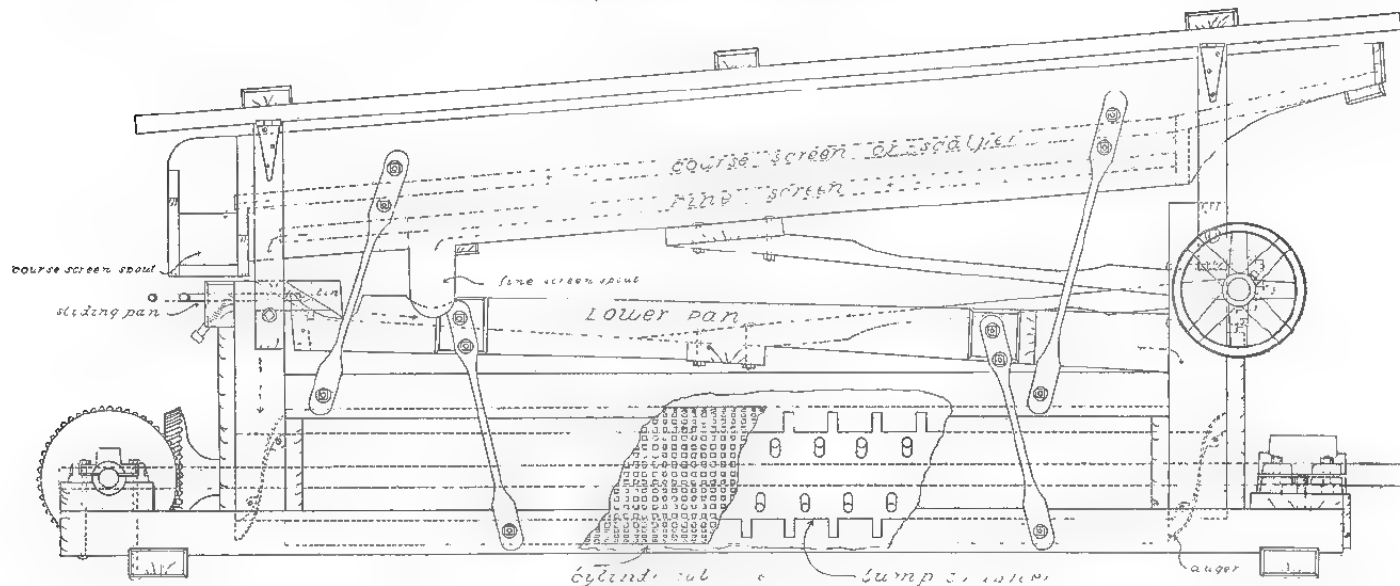
Only Successful Bean Recleaner Placed on the Market.



Dirt Lump Crusher. (wears out the dirt)

WARRANTY.

The Bidwell Recleaner and Lump Crusher (patented) is guaranteed for Capacity and Durability and Efficiency for work to be BY FAR the best and most complete on the market.



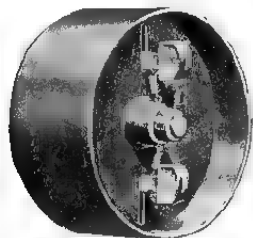
CONSTRUCTION OF RECLEANER.

It is, in sum total, a regular warehouse grading mill placed on top of the thrasher, hung upon hickory spring hangers, with a short, quick shake. To be used for the various kinds and sizes of beans. There are, viz: Three top scalpers, with round mesh hole, steel sieves; also three lower sieves, with oblong mesh hole.

Below the recleaner mill is a Lump Crusher, consisting of a cylinder, five inches in diameter, in which there is inserted 140 one-half inch round irons, which turn in a heavy steel casing; the latter being perforated with square mesh holes.

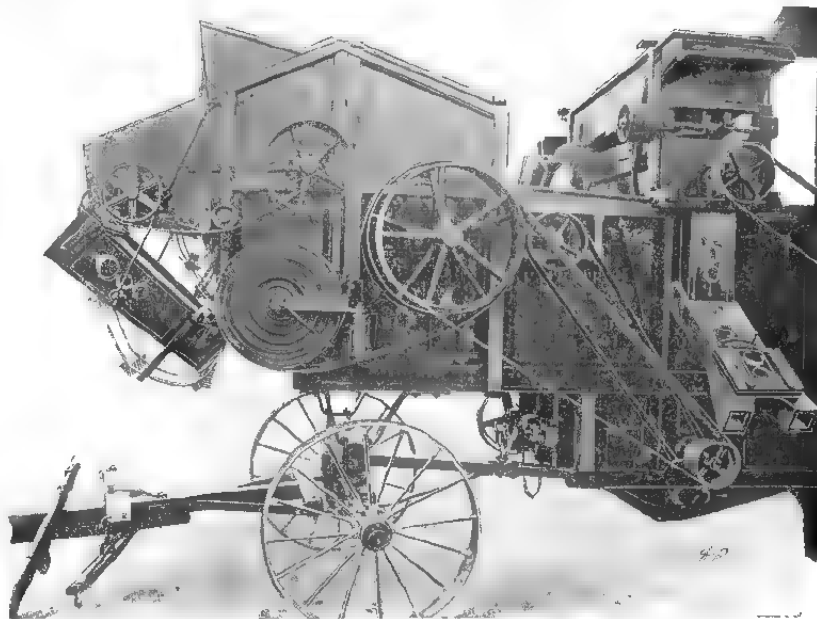
These holes are right size, just too small to allow a bean to pass through. This cylinder with the reeth plays among the beans or peas, wearing the dirt, which sifts and drops through the holes of the casing. All the beans are made brighter by rubbing each other. All the beans are pushed through the entire length of this casing by means of a short auger, one at each end, and with an even pressure. In the above described manner, the beans are graded over the different sieves, and then passing through the Lump Crusher are freed from all lumps and dirt, and come out practically fitted for market, except being hand picked. **IT IS GUARANTEED NOT TO SPLIT BEANS.**

FRICTION SPEED GOVERNOR.



WARRANTY.

That no man by hand can feed a Bean Thresher as **EVENLY** and **WELL**, and as **FAST** on all kinds and conditions of beans. Also the self-feeder helps the machine to thresh cleaner from the pods and will greatly lessen the breakage on the machine by helping to throw out the larger stones.



Bean Self Feeder, (folded)

Recleaner,

New Bidwell Bean Self-feeder.

(PATENTED)

NO SLUGGING.

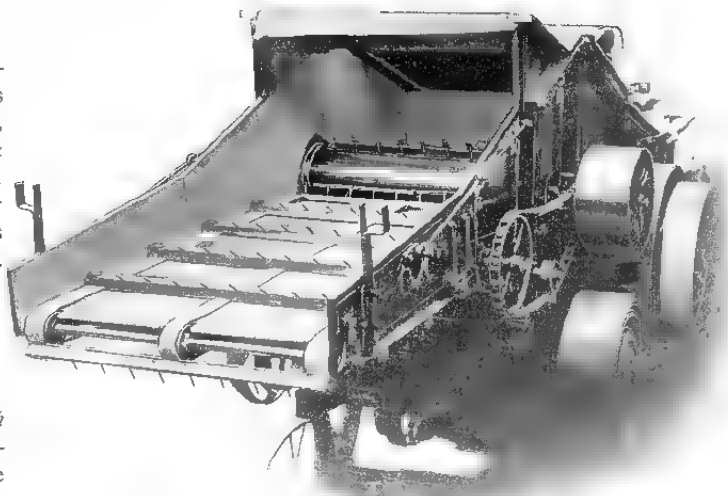
The bean vines are torn and picked apart and fed *high up on the cylinder* in such a manner that there is *no slugging*. The endless carrier consists of a durable three belt raddle, with steel teeth running through heavy oak rakes. The steel teeth slant rearward and hold the bottom of a tough wad of beans or weeds, while the tearing beater (which runs swiftly helps to feed *evenly* to the cylinder. Consequently the thresher does *better work* thrashing beans out of the pods and *better separating*. *That means more.*

FOR FAST THRESHING.

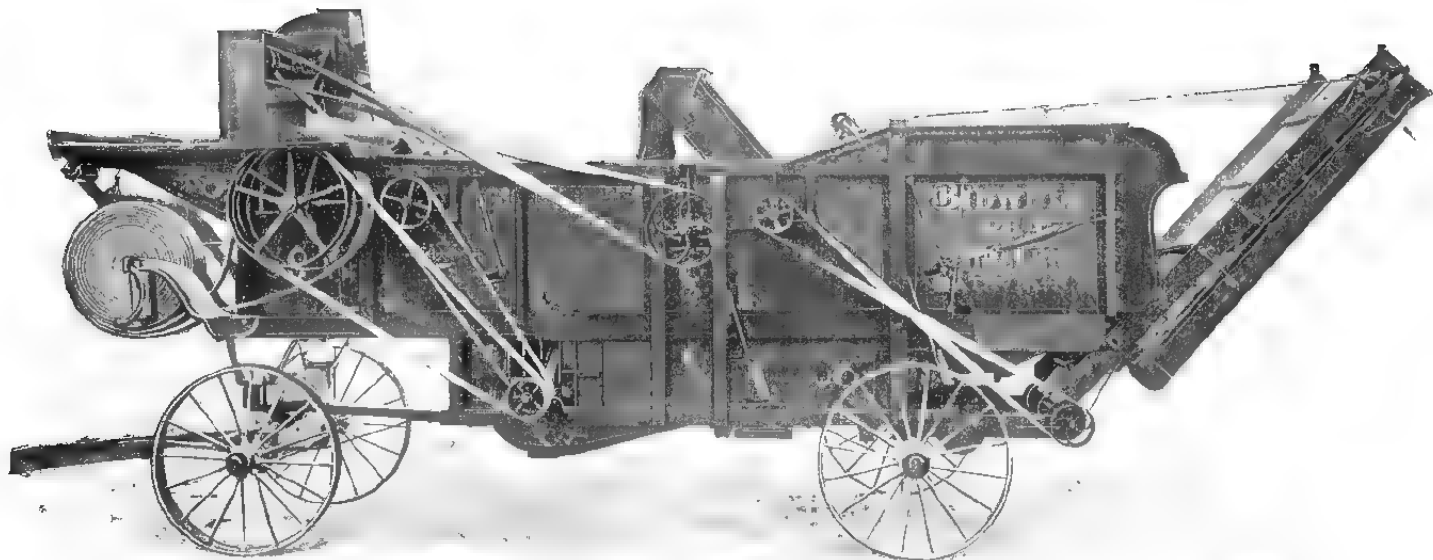
No man feeder can possibly feed as *much* or *as well* and *evenly* as the Self-Feeder. Especially upon tough, coarse, viney beans, the feeder shows its great capacity and ease of operation. Upon very dry beans it feeds fast, keeping the cylinder full, with an even flow the entire length of concaves, thereby *preventing splitting the beans*. *That means money.* A cylinder running empty part of the time will always split dry beans.

THE FEED TABLES

On the hand feeding machine are put on stationary, with folding doors at the side of the man feeding, and also back of the table to the elevator, to cover the drive belt to the second cylinder.



Bidwell Pea Huller.



SHOWING BELT REEL AND DUST COLLECTOR.

Information for Bean Threshing and Pea Hulling.

Main Drive Pulley is 28 inches in diameter.

A good 10 or 12 horse power engine will run one in ordinary work, but a 14 horse power will give better satisfaction. A good set of governors on an engine is very essential—to hold motion steady.

To run a Pea Huller or Bean Thresher successfully is an art itself, and only experience can explain to the thresherman all the details. Keep you eye open and your head with you. Each job threshes differently from the previous conditions.

A FEW GOOD RULES TO FOLLOW.

Speed your machine up to about as fast a motion as the cylinders will stand and not split the beans; i. e. the first cylinder, from 250 to 400 revolutions per minute. The second cylinder is pulled to run one-third faster than the first cylinder.

On wet, damp or tough beans the cylinder must be speeded well in order to thresh well out of the pods. On dry or weather checked peas or beans the cylinder must go slow to prevent splitting. Also in this case keep the cylinder as full as possible, and never let them run empty.

2. When your motion or speed of front cylinder is about correct, (for the condition of the crop) then see that you are running the top straw bolters at the right speed to separate well. Not too fast and not too slow.

By adjusting the cone pulleys at the bolter crank shaft. the operator can secure: (a) A fast motion. (b) A slow motion. (c) A motion half way between.

3. When speed of cylinder and straw bolter is about correct, watch the mill and see that it is running all right. Be careful in setting the amount of wind upon the mill. Too much blast will elevate too many peas or beans up into the second cylinder, and cause splitting.

An extra pulley is furnished to speed the mill shoe faster when required.

4. Feed as evenly as possible, keeping the cylinder full all the time.

For these reasons we recommend, by all means, a Self-Feeder, to prevent slugging upon tough, viney stock peas or beans. The Self Feeder works automatically. When a big bunch comes, the governor sets the fork, which regulates the flow of the peas, while the operating claws tear apart the vines and feed them high on the cylinder. The Self-Feeder saves a man, and adds greatly to the life of the machine. Also it will thresh *much* cleaner from the pods than when threshed by hand.

5. Never allow any lost motion in boxes on crank shafts. *Never* allow any pounding. The large grease chambers and hard oil cups, in combination with ordinary oil boxes, will give the best satisfaction

6. Never allow any end play on cylinders, and see that the teeth of the cylinder pass in the center between the concave teeth.

There are four reasons only for Splitting Peas or Beans: (1) Principally too high a motion (2) Too much elevation of peas or beans from the mill back up to the cylinder. (3) End play in cylinder. (4) Bent or crooked teeth

A Few Hints on the Culture of Cow Peas.

Plow the ground early and use the harrow often enough to keep the weeds and grass subdued, and just before seeding give the ground an extra good fitting, putting them in with a grain drill any time from June 1st to 25th, using about one bushel per acre. As they cannot be cultivated they should be thick enough on the ground to prevent the weeds and grass from growing among them.

When they are ready to harvest, handle them as you would a hay crop, being careful to get the vines thoroughly dry and cured in the open and putting them in a mow or stack. If the pea hay is stacked when it is too green the stack will sweat too freely and burn on the inside. If it is convenient to do so, it is best to thresh from the field and save going through the sweating process, also peas will thresh better at this time than any other. However, if the peas are stacked they should remain four or five weeks in the stack before threshing. Stockmen have told us that the vines after being threshed were much better as hay, because the shredding of the vines gets them in a condition that the stock will eat them up a great deal better.

Upon the market the seed sells from \$1.00 to \$2.00 per bushel, and the hay is worth from \$6.00 to \$8.00 per ton baled up.

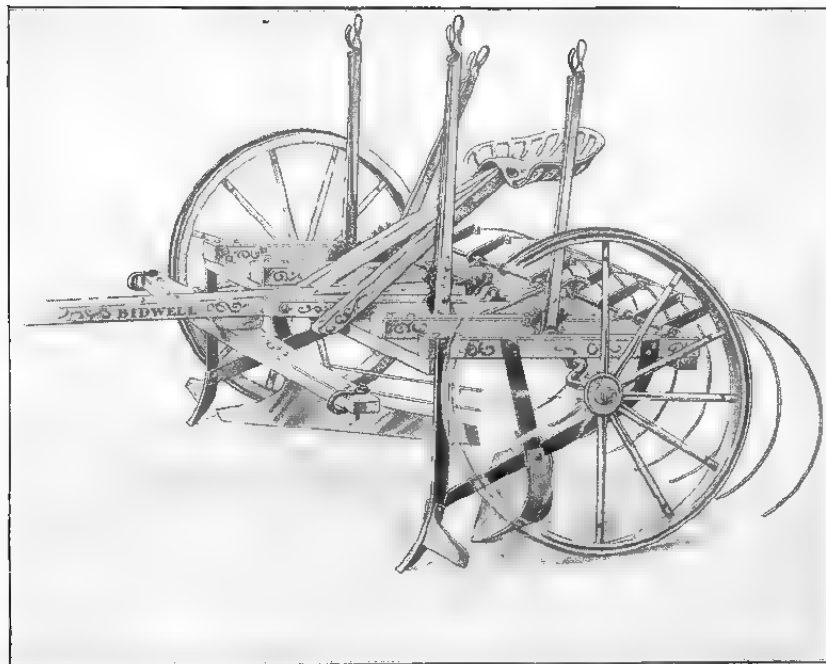
As a fertilizer peas are taking the place of clover in the middle west and south, and is a much more sure crop. There is no doubt but that peas are becoming the best fertilizer of anything else tried. They will grow and make a fair crop on land that is too poor to grow anything else, and when the crop of peas is taken from the land at harvest, the ground is left in fine condition for seeding to grass or wheat. The land is left free from weeds with the dirt very loose, and by a small amount of work either grass or wheat may be sown.

We would recommend the stock pea to all farmers having *old, thin* land that needs fertilizing badly, Take it for all kinds and condition of land, they are certainly a much better fertilizer than clover, and in fact they will grow upon ground that is too thin to grow clover.



Threshing Beans in the Field. 157 Bushels an Hour.

BIDWELL BEAN HARVESTER With (pat.) Gathering Rake.



vines of the two rows as fast as cut by the machine, depositing them ON TOP of ground. The gathering rake, is operated by the driver from the seat of the Harvester by a lever. It saves the farmer two or more men in harvesting the beans.

STRONG.

The heavy forks guarding in front of knives are steel and tempered at the points, being braced back to the heavy wrought iron standard and to the frame by a strong brace. This combination of the heavy brace with the guard and standard makes the machine exceptionally strong, and will resist any obstructions without breaking the machine. All other bean harvesters have considerable cast iron. The small guard wing in advance of drive wheels will help remove loose stones from the path of the wheel.

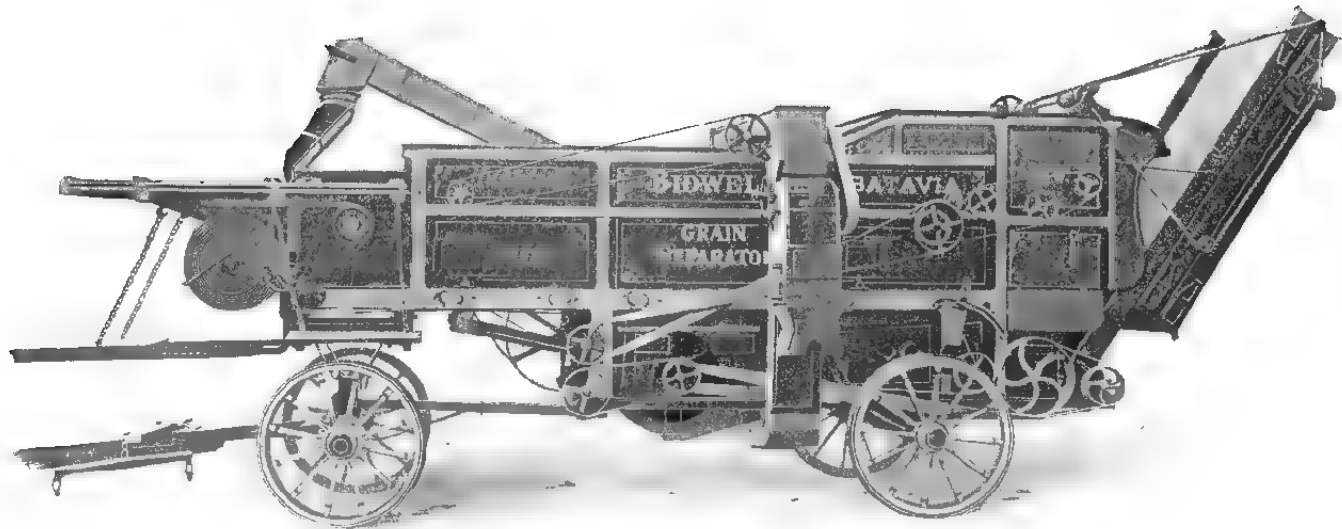
HANDY.

Each knife is adjusted, independent of the other, by levers which are very handy to operate from the seat or from the ground. The third lever, used to give the right pitch to the knives (in hard or soft ground), can be operated while the machine is in motion, from the seat or from the ground. No other harvester has this advantage. The drive wheels are provided with extra ribs, in the center of the rim, which will help prevent the machine from slipping sideways on side hills.

THE BEAN GATHERING ATTACHMENT

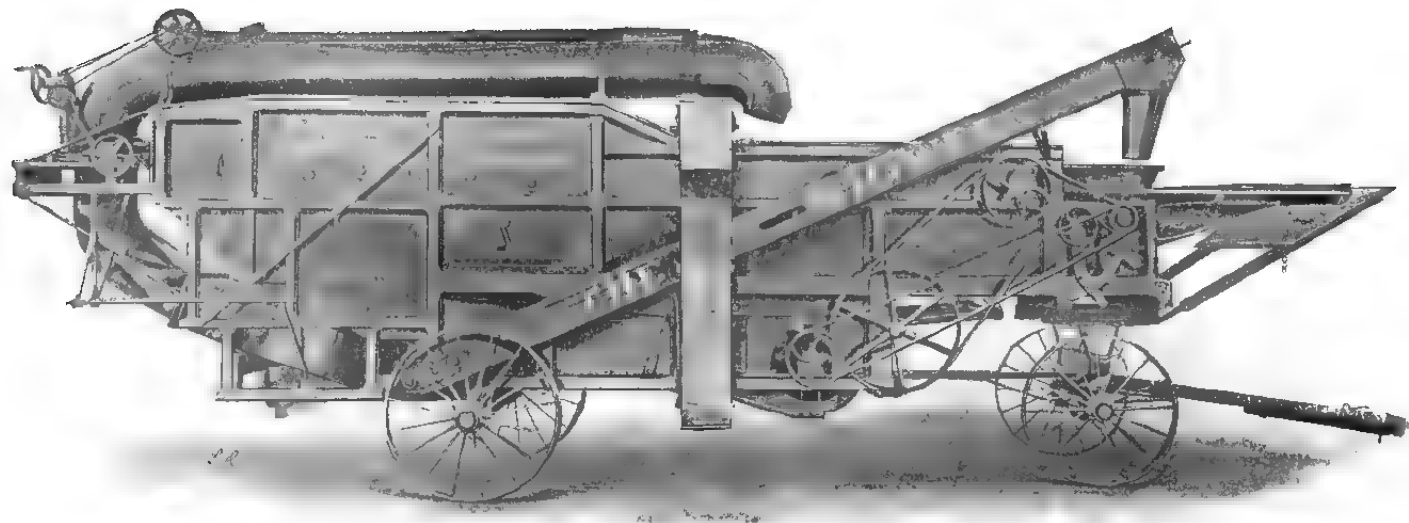
Consists of a gathering rake of special design fastened in hinged boxes to the rear frame of BEAN HARVESTER, which gathers up the bean

New Bidwell Grain Separator.



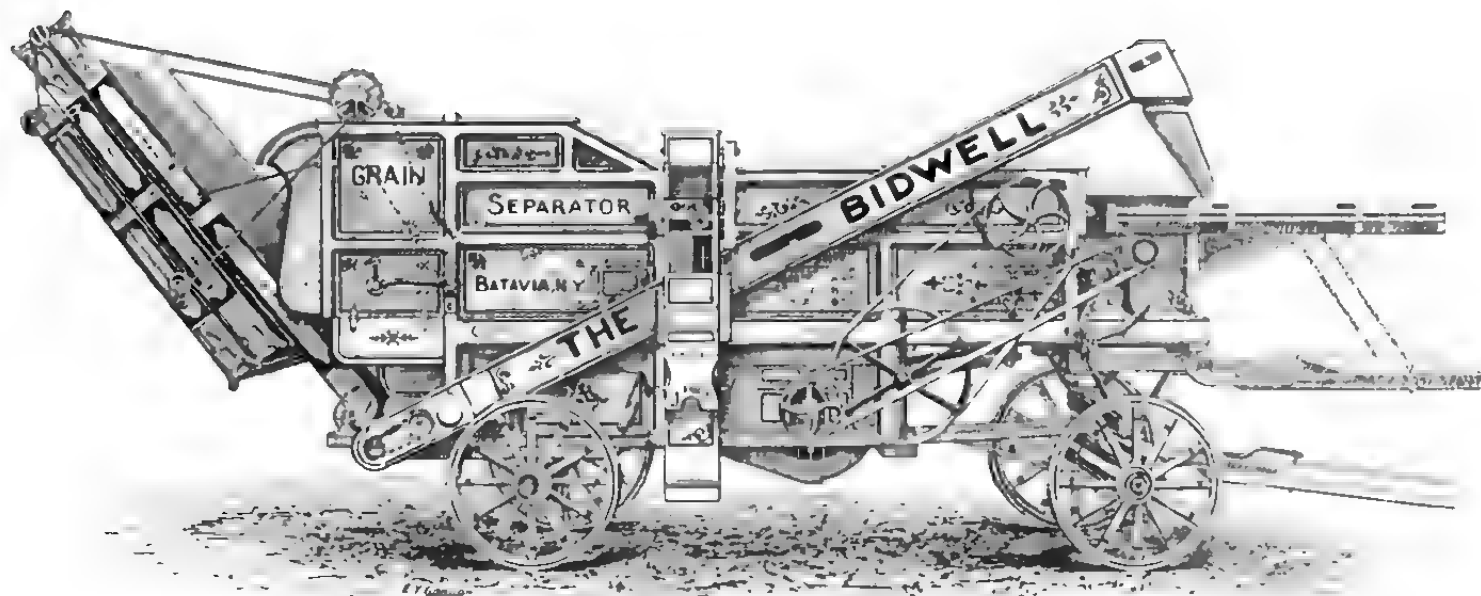
New Bidwell Grain Separator.

WIND STACKER AND BAGGER.



WARRANTY. The Bidwell Grain Separator is guaranteed to do as good or better work threshing, separating and cleaning grain than any make of machine in the United States, (size and conditions being equal.)

GRAIN SEPARATOR.



With Automatic Register and Bagger.

THE DESIGN

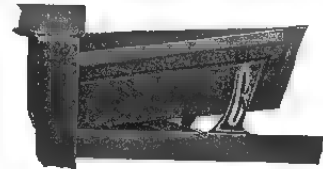
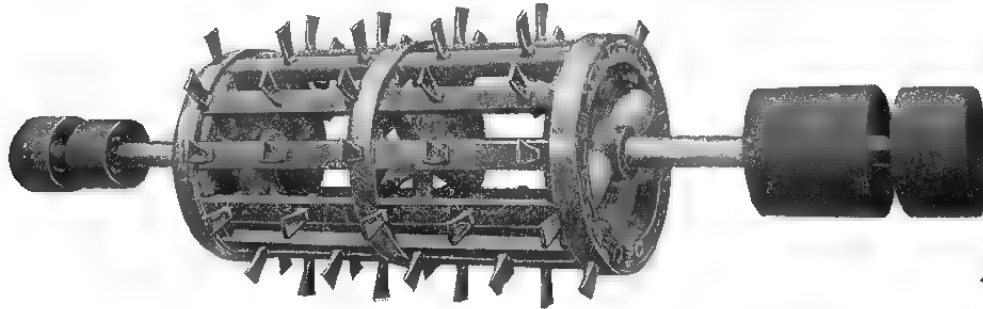
Of the Grain Separator combines strength, durability and lightness. The machine is *low down*, making it handy for threshermen to get at any part, also for using modern attachments in sections where threshing is done in all kinds of barns. The machine stands very quiet on the floor, all the working parts being balanced, and runs very smoothly.

The hard wood frame is constructed to withstand severe strains and is accurately mortised and bolted strongly together. Well seasoned lumber is used and every piece in the machine is oiled and prime painted and piled up to thoroughly dry before setting up the Separator. This preserves the machine, keeping out the moisture.

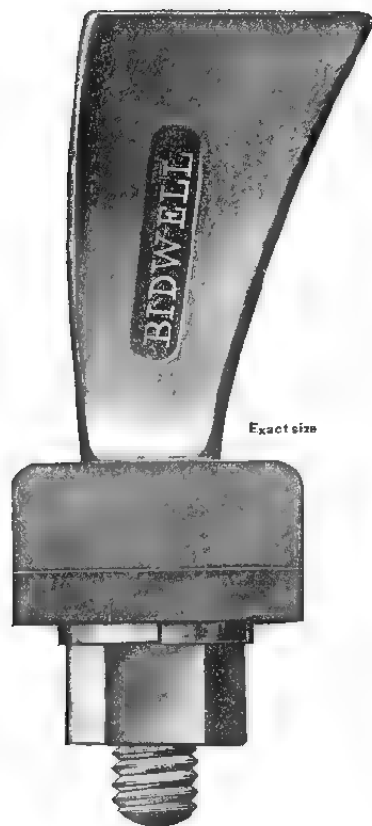
THE CYLINDER.

Has 12 double bars and the 32 inch size weighs 475 pounds. The double bars give strength to the cylinder, and together with the spring washer, hold the tapering (square shanked) teeth firmly when drawn down in place. The teeth do not get loose. The cylinder is additionally strengthened by a very wide band at each end. At the factory, every cylinder is carefully balanced by speed, being run in loose boxes at rate of 1600 revolutions per minute. The draft of the cylinder for drawing in the grain is appreciated by all feeders by hand. The feed board is steep and the suction strong and steady.

The cylinder cap is adjustable over the cylinder, allowing the hand feeder all the throat room he could possibly desire.



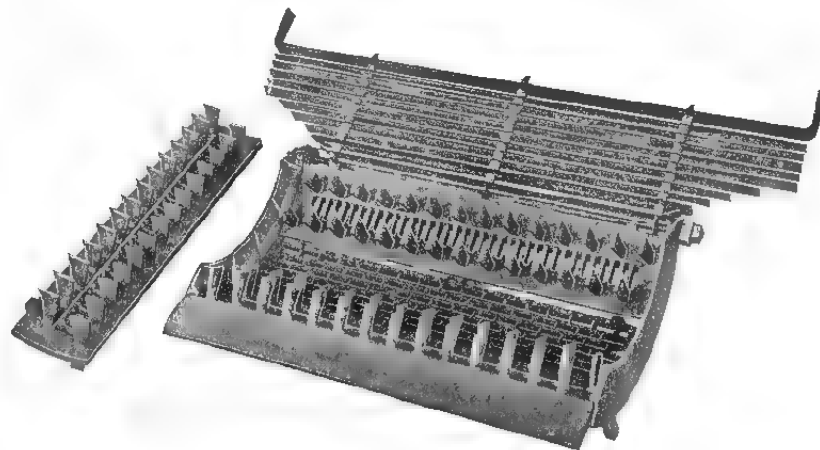
To raise and lower Cylinder Cap.



TEETH.

For concaves and cylinder are exactly one and the same. They are extra heavy and wide—they will last twice as long as the *ordinary* grain thresher tooth, and thresh much cleaner the grain from the heads. A spring washer is used, which prevents cylinder teeth working loose. The price is only 6 cents without the spring washer and hexagonal nut.

CONCAVES AND GRATE.



Concaves.

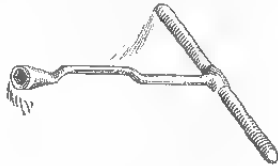
Two double rows and two open blanks are furnished with each machine. The concaves are raised and lowered by an eccentric cam on the left side of machine. The concaves are made from special tough iron, and further strengthened by a wrought steel bar on under side, through which the teeth pass.

GRATES

Just back of the cylinder are a very important factor of the good separation. Over 75 percent of all the grain is separated from the straw as it spreads and goes over these grates to the beater.

Adjustable Pivot Cylinder Box

Has overcome all heating of cylinder shafts. It is used on all our machines—Grain, Bean and Pea Threshers. We use a two-inch steel cylinder shaft, which runs in two long bearings, each box being eight inches long. These adjustable boxes, being self-lining to shaft and having plenty of bearing surface, do away with any third box. They have a large double oil cup, one part for grease, one part for oil.



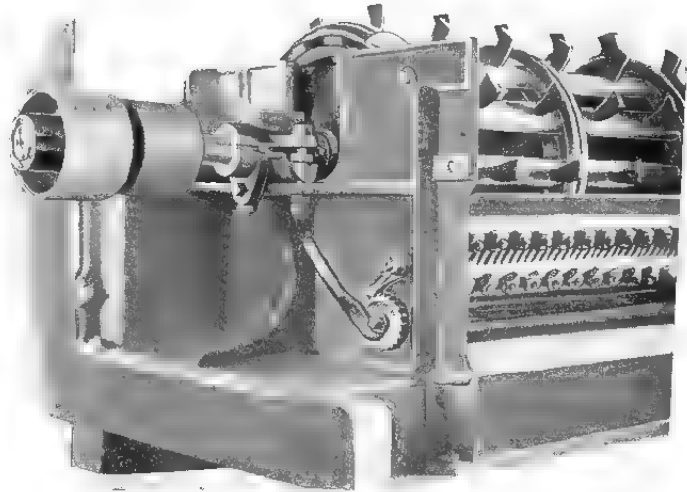
Special Cylinder T Wrench.

BEATER.

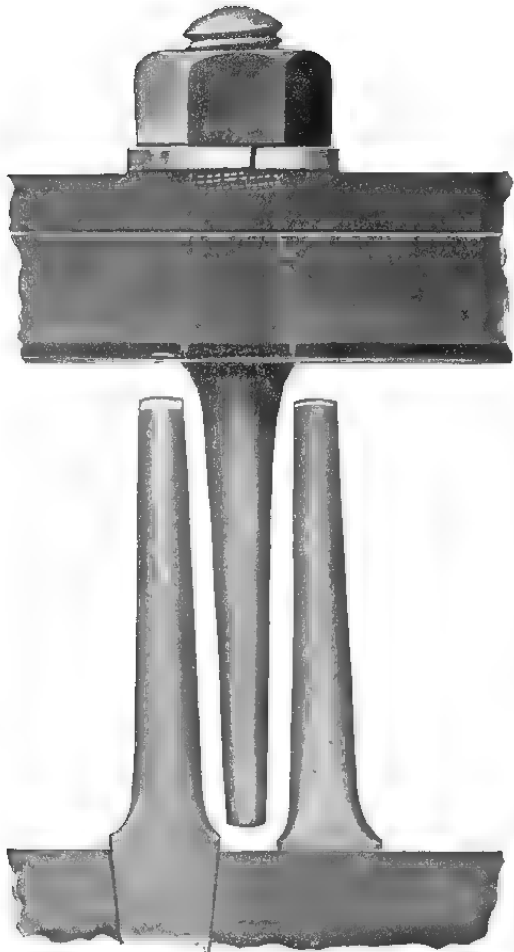
The purpose of the beater is to stop flying grain from the cylinder, and spread the straw, (aided by the action of the rocking straw bolt) evenly the full width of the machine. It is a very heavy sheet steel beater driven by a four-inch belt from cylinder shaft about 300 revolutions.

This beater never winds with straw.

Cylinder Adjustable Pivot Box. For hard grease and oil at the same time.



Concaves raise and lower by an eccentric ratchet.



INSIDE
CYLINDER
BAR.

OUTSIDE
CYLINDER
BAR.

CONCAVE.

The cylinder and concave teeth are accurately spaced as they pass, which is one reason why the Bidwell Grain Separator will not crack grain.

TAILINGS ELEVATOR.

Has heavy galvanized sheet iron bottom. It delivers direct to the *center* of cylinder. It is made up of sprocket chain and hardwood blocks, riveted to chain, and is driven in unison with tailings auger. Adjustable sliding boxes at the top shaft of elevator take up slack in chain.

The elevator being low down, permits the machine to go in barns with low doors. The short delivery spout at the top swings on a circle and is very convenient to turn. It is out of the way of the bundles.

THE SEPARATION

of the grain from the straw is most thorough. After leaving the big beater, the straw climbs and drops.

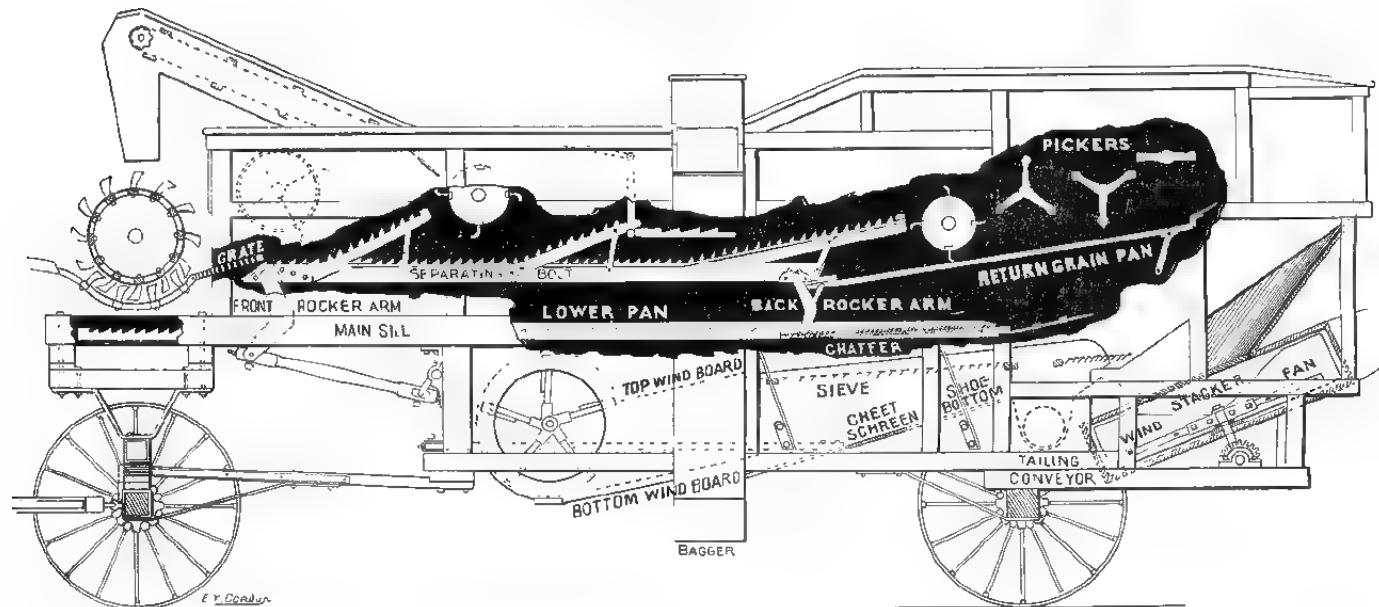
The straw rack is very open lattice work. To further shake thoroughly the straw and pull it apart and spread it in a thin sheet, a spreading picker and a vibrating shake fork are placed at the top of each incline.

See sectional view.

Bidwell Separator does not crack the grain.

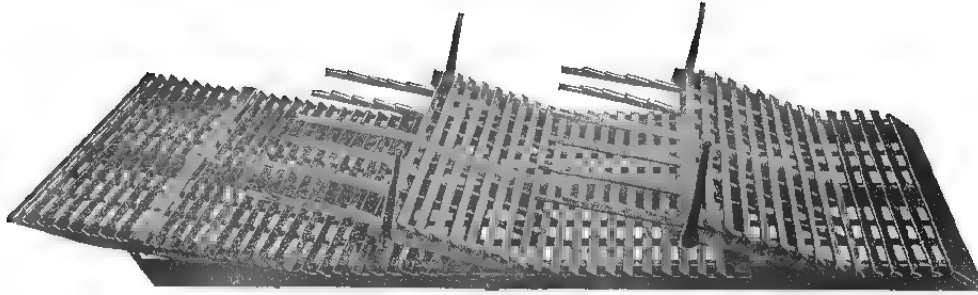
New Bidwell Grain Separator.

SECTIONAL VIEW.



See that Separation.

Straw Rack.



AGITATORS.

Here is an enormous separation when it comes to threshing. The great advantage of this form of agitation to straw and separation of grain becomes apparent over any grain thresher on the market.

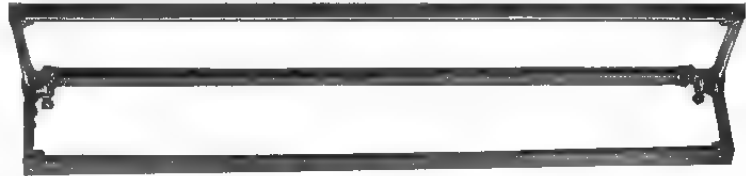
As the straw leaves the vibrating straw rack,

it is quickly picked up and swiftly tossed, passing over these open beaters or agitators in an open sheet. Each agitator takes the straw a little faster than the one preceding it, thereby thinning out the straw.

The agitators tear apart and thin out the straw to such a degree, that it is practically impossible to get enough straw through the cylinder to give any possible chance of loose grain riding out on top of the straw.

THE PITMANS

Of main crank are made of hard maple, soaked in warm tallow. Adjustable boxes are used to take up any wear. Grease cups and oil cups both are used on the large bearing crank boxes.

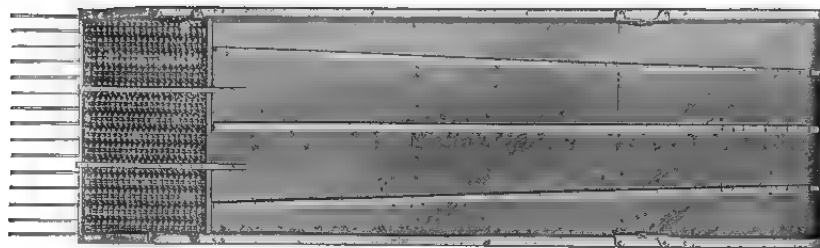


Three Winged Agitator.



Pitman.

Grain Pan, showing Coarse Chaffer over mill.



THE GRAIN PAN

Under vibrating straw rack conveys the threshed grain (as it drops through the concaves, grate and straw rack) back to the large chaffer over the mill. The bottom of the pan is galvanized sheet iron, and has long fish back strips running longitudinally in center. These hurry the chaff and grain along and deliver it evenly over chaffer.

The grain pan (below) and the vibrating straw rack (above), on the rocker arms, nicely counter-balance each other. The machine runs *exceptionally steady*.

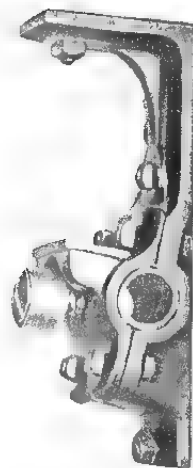
THE FAN

Is driven direct from cylinder by a 4 in. belt. We use a double fan of the under-blast type. The wind is regulated by shut blinds.

FLAX THRESHING.

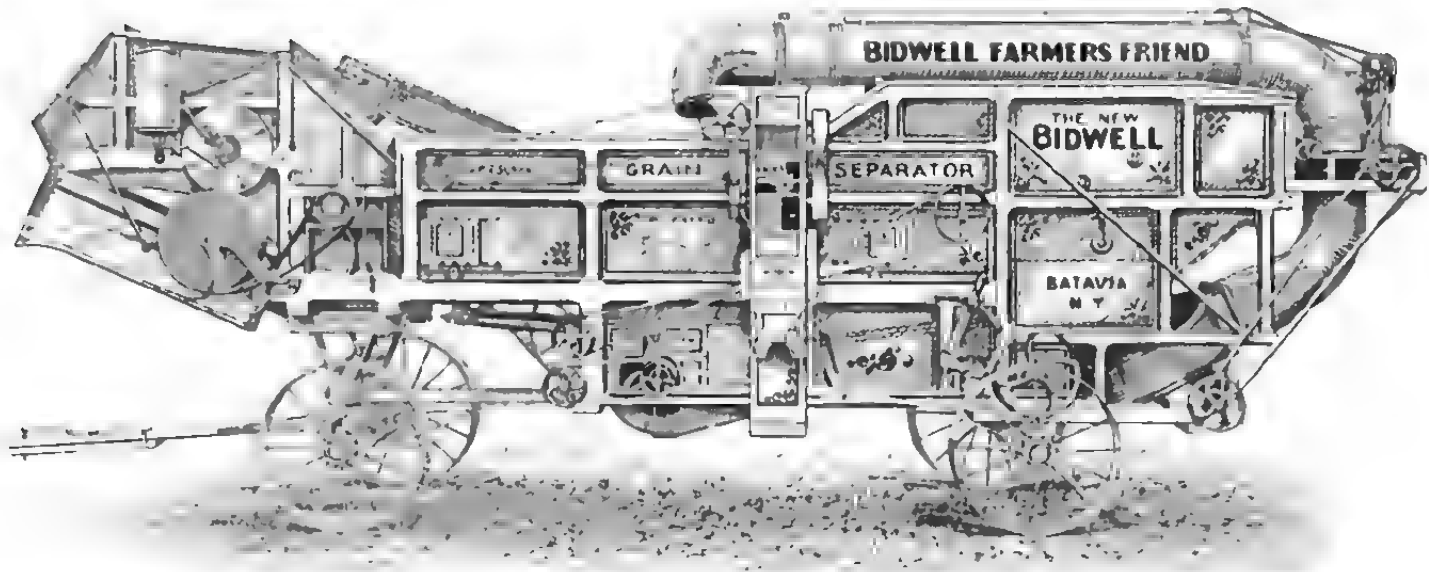
It will not wind or give any difficulty on this class of grain. The parts which wind readily on other machines are made to prevent wrapping on this machine in the flax-growing sections. The straw goes through the separating parts quickly and uniformly.

Crank Box.



**Large Bearing and
Double Oiling.**

New Bidwell Grain Separator.

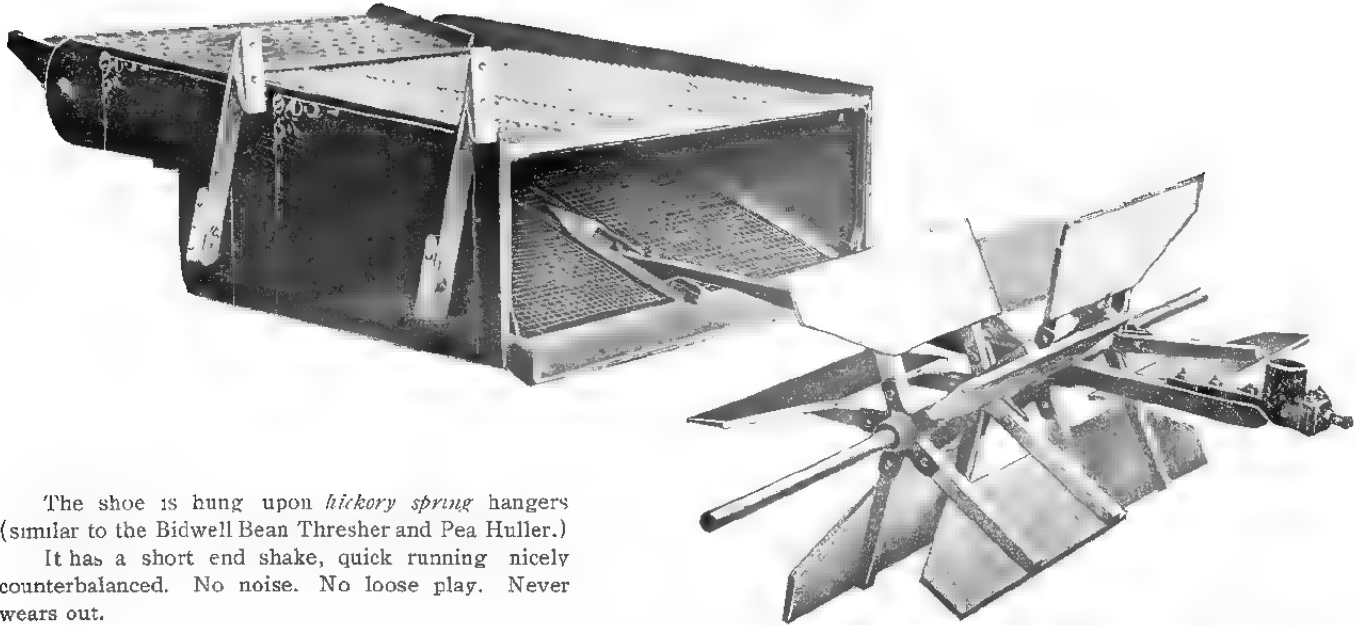


Self-Feeder.

Automatic Register.

Wind Stacker.

THE MILL SHOE AND DIVIDED FANS.



The shoe is hung upon *hickory spring* hangers (similar to the Bidwell Bean Thresher and Pea Huller.)

It has a short end shake, quick running nicely counterbalanced. No noise. No loose play. Never wears out.

The shoe and sieves are the full width of the machine and the bottom is sheet iron, making it firm and lasting. When the **SCREEN** is used in bottom of the shoe, a board (made for that purpose) is removed.

CHAFFER.

The large chaffer and shoe sieves are so located that the wind from the fan can blow well between and up through them. For this reason the Bidwell Mill does an *extra fine* job cleaning grain.

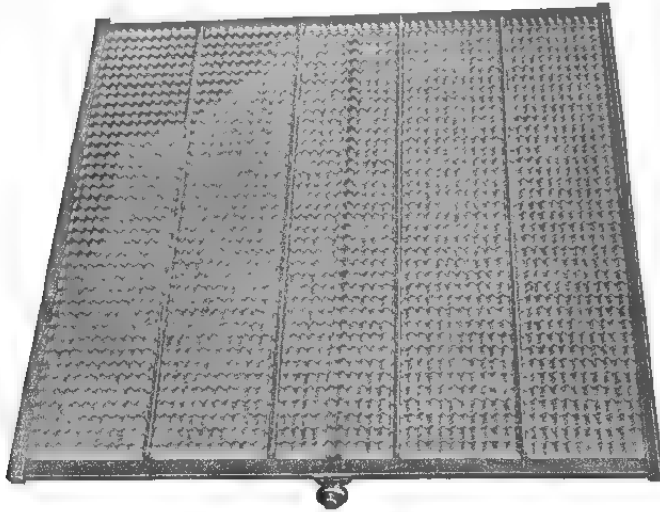
In the sectional view, page 34, the mill shoe is shown with one sieve set in place underneath the large chaffer, and only one sieve need be used, as conditions may necessitate, by using the adjustable sieve, but there is room for a second sieve.

ADJUSTABLE SIEVES.

Adjustable sieves will be furnished on all separators when desired, at a slight extra cost.

The lips can be opened and shut to suit the operator for different kinds and conditions of grain *without* sliding in and out

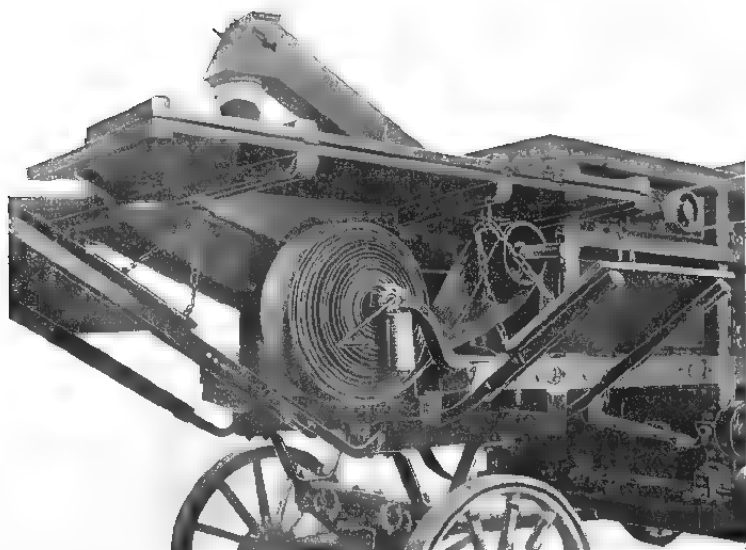
the sieve itself. A great convenience and time saver to the thresherman. It can be adjusted to a great nicety for fine cleaning while the machine is in operation, or adapted to wheat, oats, barley, rye, buckwheat or other grain. For timothy another fine sieve is used underneath.



Adjustable Sieve.



Belt Tightener.



WARRANTY: The New Bidwell Grain Separator is guaranteed to do as good or better work Threshing, Separating and cleaning grain than any machine in the United States, (size and conditions equal.) And that as a machine it is well built and finished strong and durable.

THE FEED TABLES

are simply folded over the hopper in moving. No time wasted in having to remove them.

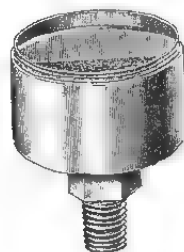
A BAND CUTTER'S STAND

is made to attach to either side of the separator. From this platform the band cutter faces the feeder within easy reach of the passing bundles of grain and without danger of knifing the man feeding.

THE BELT REEL AND GUIDE

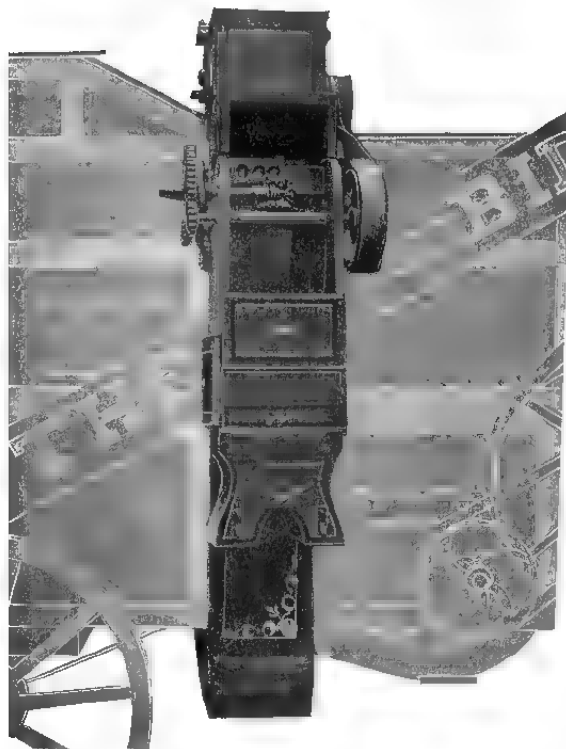
affords a convenient means of rolling up and carrying the main drive belt. The steel guide rollers prevent the belt from being blown to one edge of the cylinder pulley when threshing in windy weather.

Grease Cup.



We would be Pleased to Prove our Guarantee to you.

AUTOMATIC REGISTER AND BAGGER.



MEASURES AND REGISTERS EVERY BUSHEL.

THE MERRY-GO-ROUND REGISTER AND BAGGER.

We recommend it as the most convenient, always out of the way.

One man can change the register from one side to the other, and the elevator is always on the thresher ready to work.

The measuring attachment (extra) measures the grain by the bushel accurately and registers same without a skip. By this device the thresherman is enabled to get his just measurement. This is more satisfactory than a heavy weigher and is accurate and very simple in construction. It will pay for itself every season.

BIDWELL BARLEY BEARDER. (Patent Pending)

In special barley growing sections there is a demand for a barley bearder for certain varieties extremely difficult to beard with a cylinder.

The Bidwell Barley Bearder meets this demand fully. It is driven direct from the cylinder shaft with a 3 1-2 inch belt.

SWORN STATEMENT.

BERGEN, N. Y., March 4, 1903.

I bought a new Bidwell Grain Separator with Wind Stacker last season, and will say that it is the best machine I ever owned or see (I have threshed for nine years with different kinds), and that I averaged \$25.00 a day for forty days work. It feeds well and is a pleasure to operate, as it requires so little care.

The separation is extra good.

The mill cleans the grain A No. 1.

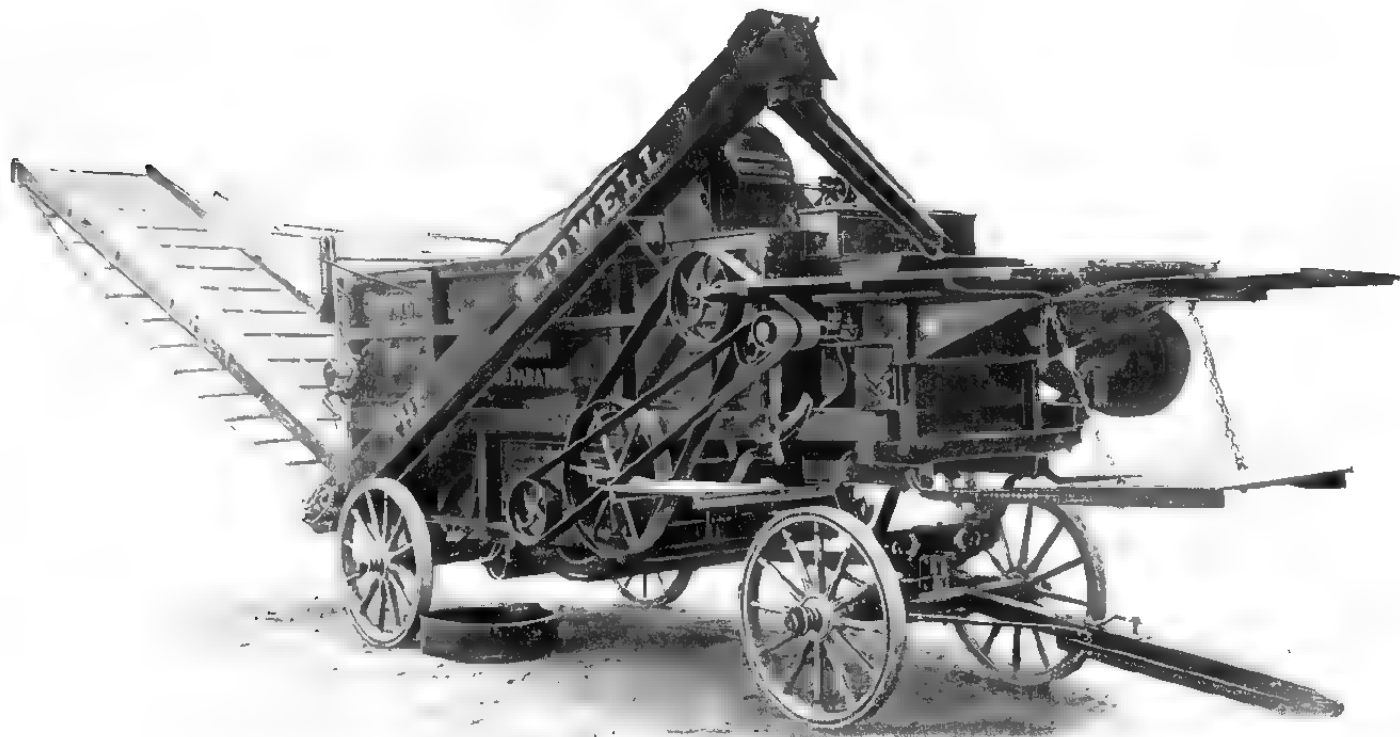
CHRIS DILCHER.

State of New York, }
County of Genesee. } ss

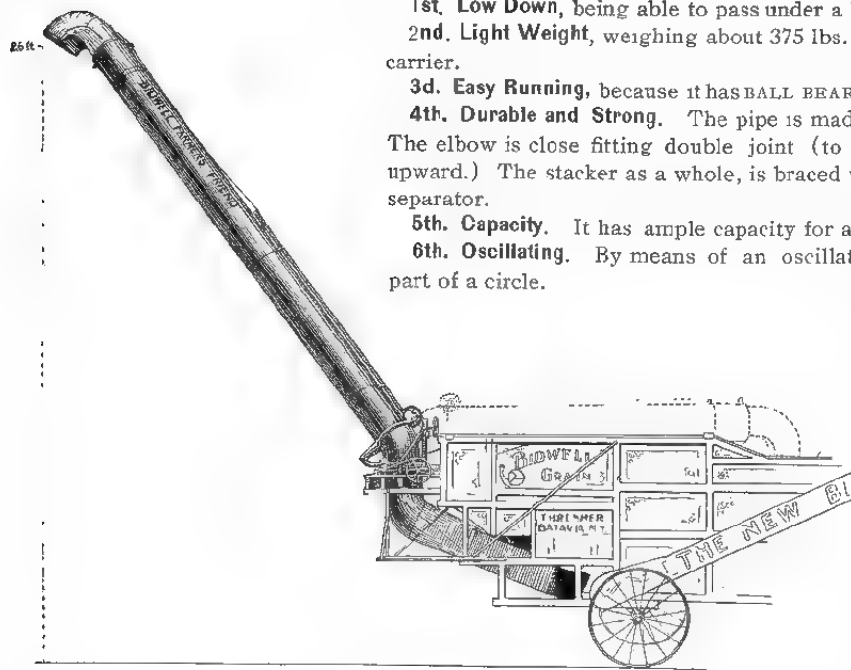
Sworn to before me this 4th day of March, 1903.

E. E. LAZIER, Notary Public in and for Genesee County.

BIDWELL GRAIN SEPARATOR Junior.



BIDWELL F. F. WIND STACKER.



1st. **Low Down**, being able to pass under a 10 ft. barn doorway.

2nd. **Light Weight**, weighing about 375 lbs. more than a common 24 ft. folding straw carrier.

3d. **Easy Running**, because it has BALL BEARINGS and is driven from cylinder direct.

4th. **Durable and Strong**. The pipe is made of galvanized steel, 15 inches in diameter. The elbow is close fitting double joint (to allow the pipe to extend almost straight upward.) The stacker as a whole, is braced well; and bolted and trussed firmly to the separator.

5th. **Capacity**. It has ample capacity for all that the machine can take care of.

6th. **Oscillating**. By means of an oscillating turntable, the stacker is swung in any part of a circle.

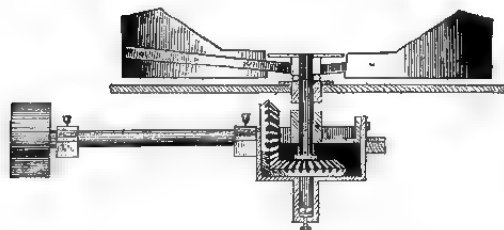
7th. **Telescoping Chute**. The telescoping pipe is raised and lowered by a simple hand wheel and worm gear. The pipe can be telescoped from 10 to 20 feet.

8th. **Revolving Hood**. Can be turned or revolved to throw the straw in any direction, to right or left, straight ahead, or down.

9th. **Saves Labor**. One man at separator and one good man upon the straw stack, working in unison, can build successfully a better stack than by the old fashioned method. For barn threshing one man can deposit the straw at any point in the mow.

WARRANTY. That it can be successfully operated with a 12 H. P. Engine when attached to a Bidwell Grain Separator running at full capacity. That it WILL NOT WASTE grain, and can take care of ALL THE STRAW fed through the cylinder when run at full speed.

FAN SHOWING BALL BEARING.



10th. Saves time. To the thresherman: Swing the stack pipe around to where you wish to deposit the straw and it is ready to thresh. When the job is finished swing the pipe around the machine and the stacker is ready to move.

11th. Saves Money. It saves money to both the thresherman and farmer.

12th. A Money Maker. In the Middle States hay is becoming more scarce each year and many farmers desire to deposit their straw back in the mow of their barn. With a low down Bidwell Wind Stacker the straw can be placed where the farmer wishes, anywhere within thirty feet of the machine.

INSTRUCTIONS.

Speed of cylinder of Bidwell Thresher should be about 1150 revolutions per minute. This may be increased for damp grain or lowered for very dry grain.

We can furnish main drive pulleys 7, 8 or 9 inches in diameter. (This measurement INCLUDES leather covering.) 8 inch drive pulley will be sent on machines, if not otherwise ordered.

An easy rule for getting proper size of Main Drive Pulley for Bidwell Separator to suit speed of engine is, Multiply the speed of the engine by diameter of its fly wheel in inches and divide the product by 1150. Example: Engine running 235 revolutions per minute with a 40 inch fly wheel. Multiply 235 by 40, and the product will be 9400; divide 9400 by 1150 and the quotient will be 8 4-23. When the answer does not come out exactly, select the nearest pulley just smaller. In above example, we would therefore select an 8 inch pulley.

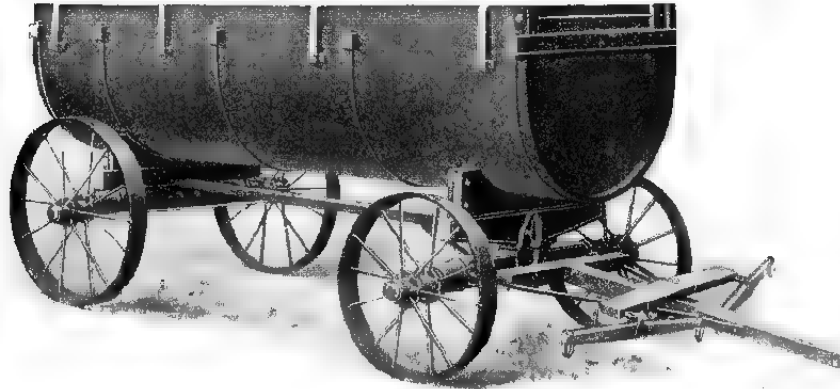
For ordinary use two double rows of sections of concaves with open blank between is usually all that is necessary for threshing grain out of the heads, even on very tough grain, if the concaves are raised up close to the cylinder. However we furnish the third double row on exceptional cases.

Use no more teeth in concaves than are necessary to thresh the grain out of the heads, and the cylinder will run easier.

One single row in front may often be taken out to advantage when the grain is very dry, or use a double row in front and two open blanks. The less you cut up the straw, the better for separation and fast work.

WATER TANK.

CAPACITY 13 BARRELS.



MOUNTED ON STEEL WHEEL TRUCKS.

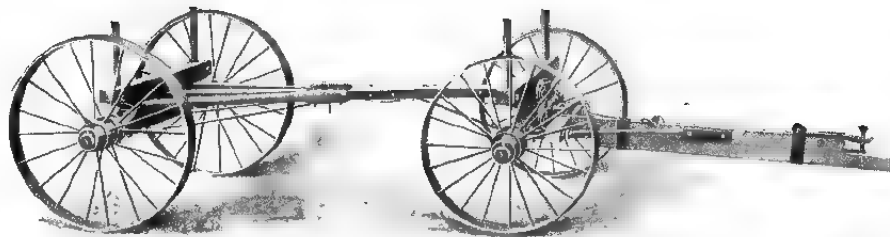
The tank is separate from the trucks and can be mounted on any ordinary farm wagon.

(Pump, hose and brake).

THE BIDWELL WATER TANK is mounted on steel wheels, as shown in this illustration, with either four or six inch tread tires; or if desired wooden truck wheels. The axles and skeins are the same as used on the threshers. The half round shape keeps the weight low down on the trucks and allow the front wheels to cramp short. A baffle is placed in the tank to prevent the water from rushing from one end to the other when suddenly started or stopped, or when going over rough uneven ground. The top can be used for carrying considerable coal or wood or what-not, if desired. The short tongue allows the tank to be coupled close to the engine. The reach runs clear through over the back axle and transmits the pull (when the thresher is coupled on back of the tank) direct to the front axle without any strain on the tank.

TRUCKS.

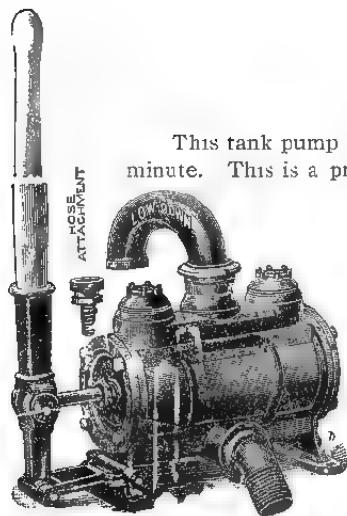
The trucks make a neat, desirable low-down wagon when the tank is not being used. A common wagon box can be placed on them.



Low-Down Truck Wagon for Tank.

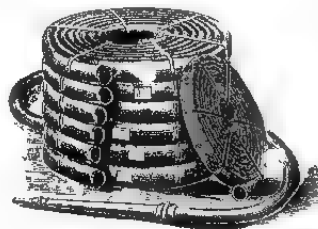
TANK PUMP.

This tank pump is simple, durable and easily has a capacity of one barrel per minute. This is a practical pump for filling tanks, washing out boilers and general use about the farm. The check valves are metal faced with rubber.



Low-Down Tank Pump.

(Write for Prices)

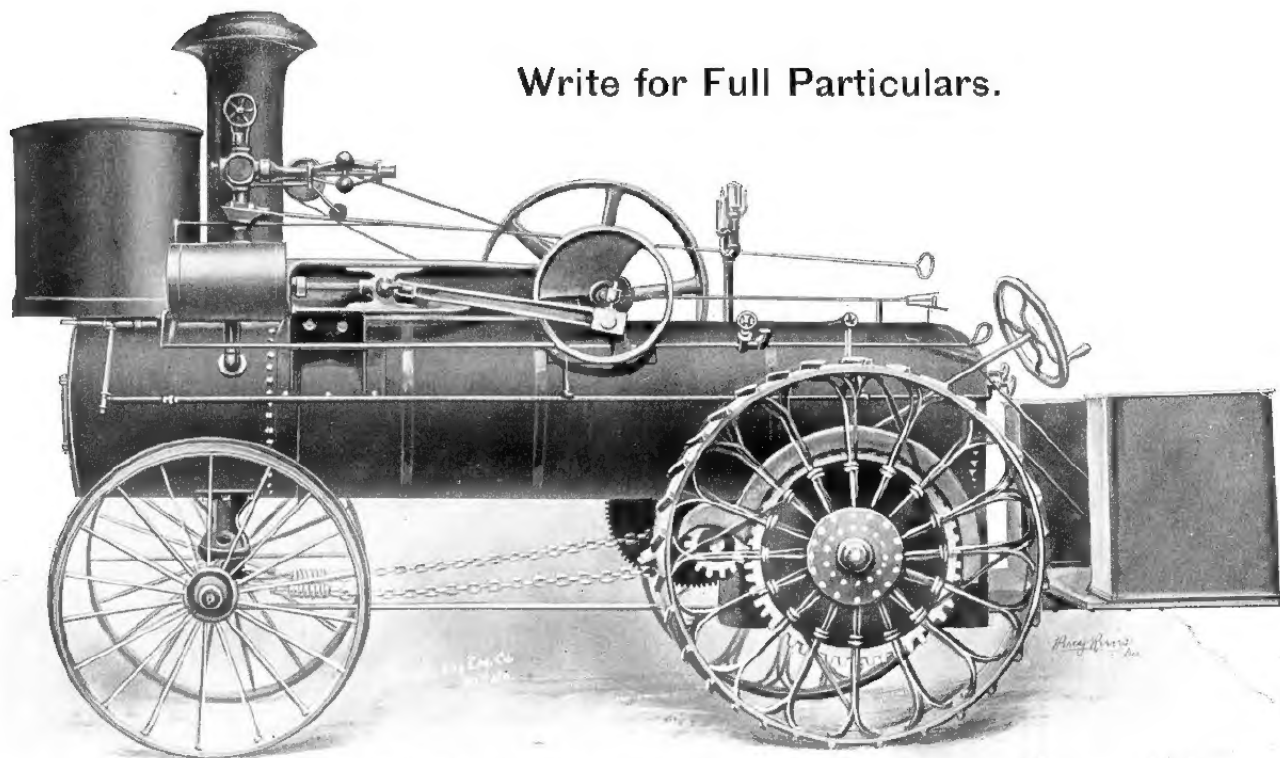


Hose.



Main Drive Belts.

Write for Full Particulars.



GRAIN SEPARATOR TALKS.

Kent, N. Y., Nov. 14, 1903.

Bidwell Thresher Works.

Dear Sir: In regard to my new Grain Separator, with wind Stacker and Bagger, I have seen people who claim to thresh more than I know I have in a single day. In fact I can't get the grain fast enough to know what I could do, *but I have threshed this fall 45,000 bushels of grain in 42 1-2 days.* I have run this without a slip. I have had to make no repairs whatever and can see no signs of wear on the separator anywhere. I consider it just as good as the day I bought it except what little the cylinder teeth are worn. However, those big teeth in the cylinder will last all through next fall I believe, or nearly so. I like your machine first rate and the size (32 x 48) is about right for our country. I use a 12 H. P. Engine.

Yours Sincerely,

C. E. BYERS.

Subscribed and sworn to before me this 28th day of November, 1903.

H. S. BEARDSLEY, Notary Public.

Dundee, N. Y., May 11, 1903.

R. F. D. No. 2.

Gentlemen: The new Bidwell Grain Separator with wind stacker (size 32 x 48) has given perfect satisfaction. It cleans grain ready for market and has a first-class separation. I consider it the best machine made. The wind stacker is a good labor saving device in this country. It suits the farmers. We threshed for Geo. O'Neil and L. Pitcher, (Dundee, R. F. D. No. 17) 1250 bushels oats, 100 bushels rye in eight hours making two sets, also for S. J. Thayer, (Penn Yan, R. F. D. No. 2) 960 bushels oats in five hours.

JOHN C. BAILEY.

Subscribed and sworn to before me this May 11th, 1903.

L. STACY WILLARD, Justice of the Peace.

Campbell, Steuben Co., N. Y., November 16, 1903.

Bidwell Thresher Works.

Gentlemen: We wish to say that we think the Bidwell Grain Separator can't be beat. Ours is a 28 x 42 size and if we were to buy a new one to-day we would get a Bidwell. It has taken the cake where we have been, in spite of all opposition and price cutting of our competitors. But we have done as your agent told us—"kept still and kept sawing wood." We have had a big run and cut prices with no one and our work talks for itself. Our jobs run small, but we have threshed oats 4 bushels per minute. All grain was very light in yield and the straw big and wet—besides we have a lot of buckwheat. The machine pleases the farmers and every man wants us for another year. Please accept our thanks for your promptness and our pleasant business dealings.

Yours as ever,

A. T. LEWIS & SONS.

Farmer, N. Y., November 28, 1903.

Dear Sirs: The New Bidwell Grain Separator (32 x 48) with wind stacker I purchased of you this season has proved all you claimed for it and more than I expected. I do not think that it can be beat by any machine in the State for *FAST WORK, good cleaning and SEPARATING and NO BOTHER.* I started it up and run until the work was all done and have not had one loose spike in the cylinder nor a warm box. I have threshed a good many years and never before saw *this happen.* I have threshed at the rate of 200 bushels of wheat per hour and could have done more, if the farmers could get the straw to the machine. The wind stacker did its work perfect. No farmer had grain enough to hold us a day. At J. B. Sniffin's farm we threshed 465 bushels of wheat and 560 bushels of oats in seven hours. Also the new Bean Thresher we bought October 1st. runs good but the beans are wet and poor—no money in beans this year.

Yours,

THOMAS TAYLOR & BRO.

